

ACTES DU XV^e CONGRÈS INTERNATIONAL DES LINGUISTES

QUÉBEC, UNIVERSITÉ LAVAL
9-14 AOÛT 1992

4



PROCEEDINGS OF THE XVth INTERNATIONAL CONGRESS OF LINGUISTS

QUÉBEC, UNIVERSITÉ LAVAL
9-14 AUGUST 1992

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Le XVe Congrès international des linguistes a été organisé par l'Université Laval avec le concours de l'Association canadienne de linguistique (ACL) et sous les auspices du CIPL. Au nom du CIPL, l'Université Laval a été heureuse d'être l'hôte officiel de ce quinzième congrès, CIL 92, qui s'est déroulé du 9 au 14 août 1992 à la Cité universitaire dans la ville de Québec, Canada.

Les langues du Congrès étaient le français et l'anglais, les deux langues officielles du Canada.

The XVth International Congress of Linguists was organized by Université Laval in collaboration with the Canadian Linguistic Association (CLA) under the auspices of the PICL. Université Laval takes pleasure in inviting you, in the name of the PICL, to this fifteenth congress, ICL 92, which will take place from August 9th to 14th, 1992, on the university campus in Quebec City (Canada).

The official languages of the Congress were the two official languages of Canada, English and French.

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*"Les Langues menacées :
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DU XV^e CONGRÈS
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Les langues menacées



Publié par
André Crochetière,
Jean-Claude Boulanger
et Conrad Ouellet
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SECTION 8

LA LANGUE DANS LE TEMPS

THE HISTORY OF LANGUAGE

CONFIGURATIONALITY IN LANGUAGE TYPOLOGY AND DIACHRONIC SYNTAX

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1. INTRODUCTION

The present paper is, first, concerned with certain general syntactic differences between German and the modern Scandinavian languages, these being Icelandic, Faroese and Mainland Scandinavian (Norwegian, Danish and Swedish) and, second, further aspects of morphosyntactic variation in the Scandinavian domain. These differences are considered within a typological framework defined by the following parameters: (i) the SOV/SVO distinction; (ii) the relationship between syntactic rules and case assignment rules, in particular the question whether certain syntactic rules are uniquely correlated with one specific morphological case or whether they are allowed to operate on NPs in different morphological cases (cf. Collinge, 1984: 19, on Latin vs. Greek); (iii) syntactic configurationality vs. non-configurationality, conceived of as a distinction of having either a hierarchical constituent structure or hierarchically independent syntactic relations as the basis of the syntax (Hale 1983). In the former case, the existence of a VP constituent is assumed to be of basic importance (Faarlund 1990: 83 et passim).

2. SYNTACTIC RULES AND CASE ASSIGNMENT

At all times of its recorded history, German has possessed SOV structures (Lenerz 1984), and since the beginning of the NHG period, these have been regularized as clause-final verb field constructions (Lehmann 1971; Bech 1955). Like Latin, German has a functionally important system of morphological cases and strongly favours the unique correlation of syntactic rules with one specific case (Reis 1982). For instance, infinitive formation is based on the deletion of nominative subjects (1), certain other deletions require case identity (2), and the personal passive is based on the conversion of accusative objects only (3):

- (1) Er wünschte, __ (N) ihnen zu helfen.
- (1') *Sie wünschten, __ (D) von ihm geholfen zu werden.
- (2) Er wird für tüchtig gehalten, aber *(ihm) scheint die Arbeit trotzdem zu schwierig.
- (3) Er wurde von den Freunden unterstützt/*geholfen.

There is no evidence that this was any different at earlier stages of the history of the language.

As far as syntactic configurationality is concerned, several syntactic rules seem to refer to a VP constituent (Fanselow 1987: ch. 2-6). However, a number of other syntactic phenomena indicate a certain amount of non-configurationality

(1987, ch. 1, 7). Besides, German subjects and objects do not possess uniquely characteristic distributional properties (although positional preferences are readily observable; cf. Engel 1988: 320 ff.). Although the question of configurationality in German has not as yet been investigated in a diachronic perspective, it seems a fair assumption that the history of the varieties underlying the present German standard language is characterized by a basic morphosyntactic stability. The Scandinavian languages have, on the other hand, followed a course of development which has rendered them typologically distinct from German and which has also produced considerable diversity within the Scandinavian domain.

Whereas the oldest runic inscriptions still exhibit instances of (S)OV order (Braunmüller 1982: 125 ff.), classical Old Norse is plainly (S)VO. With regard to the correlation of syntactic rules (infinitive formation, etc.) and case assignment, there is, on the other hand, no evidence that the situation was in principle any different from that of modern German with its interdependence of syntactic rules and morphology. With regard to configurationality, Faarlund (1990: 86 ff.) has produced massive evidence that the syntax of Old Norse had in fact clear non-configurational traits. Hence, Old Norse may be considered as topologically innovative, but in other syntactic respects conservative. The grammatical systems of the modern Scandinavian languages display different systematic stages of a general development towards generalizing syntactic configurationality within the SVO pattern reached by Old Norse. In Mainland Scandinavian, morphological case marking is only vestigially present in certain personal pronouns. Relational distinctions are coded positionally in a way mirrored by the topological field schema of Diderichsen (1962), the main traits of which are applicable to Danish, Norwegian and Swedish alike, cf. (X = any initial element; n, N = nominals; a, A = adverbials; v, V = finite and infinite verbs):

- (4) X v n a a V V N N A
 I år hadde han dessverre ikke husket å gi sin kone noen presang til fødsels-dagen.
 ('this year he had unfortunately not remembered to give his wife a present for her birthday')

Configurationality is not only a basic feature of Mainland Scandinavian. It is also characteristic of Icelandic and Faroese as is evidenced by the so-called "oblique subjects". These are NPs in the accusative, dative, or genitive case which have the distribution and even other syntactic properties of nominative subjects. Cf., e.g., the infinitive formation in Icelandic (5), Faroese (6), and the deletion of the second NP in Icelandic (7), Faroese (8) (from Zaenen et al. [1984]: 9, 10, and Barnes 1986: 26, 29) with the corresponding German examples in (1) and (2):

- (5) Ég vonast til að __ (A) vanta ekki peninga (A). ('I hope not to lack money')
 (6) Eg kann ikki torga at __ (A) vanta pengar (A). ('I can't stand lacking money')
 (7) Hann segist vera duglegur, en __ (D) finst verkefnið (N) of þungt. ('he claims to be clever, but finds the homework to hard')
 (8) Mær (D) tóktist hetta (A) lógið og __ (D) kom í hug tað (A) Jógván hevði nevnt i brævinum. ('I found this curious and remembered what John had mentioned in his letter')

The oblique subjects in question correspond topologically to the equally positionally constrained subjects of Mainland Scandinavian.

Faroese goes somewhat further than Icelandic as it also allows for passivization of dative objects in certain cases (Barnes 1986: 27 f.); cf. (9) vs.

(10) and German (3):

- (9) *Teir vorðu hjalptir.* ('they were helped')
 (10) *Peim var hjálpað.* (do.)

The Icelandic and Faroese phenomena in question attest to certain syntactic rules being sensitive to configurational and topological aspects of sentence structure rather than morphological case. The next natural development would either seem to be to do away with case marking completely, or to generalize case marking in accordance with structural position in the sentence. The first alternative has more or less been carried through in Mainland Scandinavian. Icelandic has evidently done neither, but there is evidence that Faroese is developing in the latter direction. In Icelandic, the nominative case is required with certain postverbal, i.e. configurationally VP-internal NPs; cf. (from Thráinsson 1979: 466):

- (11) *Mér (D) lískar (Pl.)/líka (Sg.) þessir bílar (N).* (Cf. German: *Mir gefallen diese Wagen.*)

Faroese usually assigns accusative case to the postverbal NP in corresponding cases in accordance with the unmarked transitive construction (Barnes 1986: 33 f., 44):

- (12) *Mær (D) lískar henda filmin (A).* (Cf. German: *Mir gefällt dieser Film.*)

The same difference obtains between raising constructions in the two languages, cf. Icelandic (13) and Faroese (14):

- (13) *Ég tel þeim hafa verið hjálpað í prófinu.* ('I consider them to have been helped during the test'; cf.: *Þeim hefur verið hjálpað í prófinu;* German, with a different lexical verb: *Man ließ ihnen bei der Prüfung helfen.*)

- (14) *Eg helt Jógvan (A) tørva ein nýggjan bil (A).* ('I considered John to need new car'; cf.: *Jógvani (D) tørvaði ein nýggjan bil (A).*)

From a configurational viewpoint it appears noteworthy that the regularization of case assignment primarily makes itself felt in postverbal position, i.e. in the VP part of the sentence in Faroese. Replacement of preverbal subject datives by the structurally unmarked nominative is also met with (15), but with the relevant verbs this is counteracted by a tendency to assign dative case to benefactives and experiencers (cf. Barnes 1986: 33, 40, 44 f.):

- (15) *Eg (N) dámi væl hasa bókina (A).* ('I like this book well')

3. SUMMARY

The above facts from German and the Scandinavian languages appear to justify a number of more general conclusions.

First, there is a typological difference between languages with morphologically conditioned syntactic rules, as modern German and presumably the older Germanic languages, on the one hand, and languages where configurationality and distribution are more basic, as in, to a different degree, all modern Scandinavian languages.

Second, the Scandinavian facts show that a break-down of the morphological marking system is clearly no prerequisite for syntactic restructuring. In North Germanic, restructuring from a state of SÖV/SVO vacillation to Old Norse SVO is prior both to morphological reduction and to the

development of a configurational syntax. Likewise, Icelandic and Faroese have developed strong configurational traits without relinquishing case marking. Synchronously, syntactic configurationality may thus override morphological case marking.

Third, the comparison of the languages in question indicates that configurationality is a gradient parameter rather than a strict bipartitioning taxonomy. This gradience seems to be explicable in terms of the number of rules that are sensitive to configurational structure and, in particular, whether even morphological rules, such as case assignment rules, obey structural, positional requirements, as they clearly do in Faroese. For the Germanic languages dealt with here, the following Configurationality Hierarchy may be assumed:

- (16) Mainland Scandinavian > Faroese > Icelandic > German

The development of the Scandinavian languages shows that syntactic restructuring is not in general triggered by morphological change. Rather, syntactic change creates the initial conditions under which further syntactic and morphological changes may follow. These observations appear to confirm a modular conception of language structure according to which syntax is central and the other modules are formally autonomous encoding and decoding components.

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LANGUAGE ACQUISITION: A NEUROLOGICAL KEY TO UNDERSTANDING LANGUAGE EVOLUTION

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Biologists recognize two processes: the phylogenetic ones, which account for the development of species, and the ontogenetic ones, which are responsible for the growth of individuals. This distinction is however more methodological than empirical. In reality, the processes are closely related, and biologists have discovered that it is often a genetic modification of growth that produces new species.

In linguistics, the situation is less settled. Today, mainstream linguists eschew the word *evolution* and speak coyly of *language change*. They describe these changes accurately and sometimes trace them back to a given sociolect; but, except when they can invoke contextual conditioning, they do not seek to explain them, since they are convinced that it is the lot of languages to alter (Saussure 1966: 111-2) or move aimlessly under the impulse of their whimsical speakers (Postal 1968: 283-5). In biology, when evolutionary processes were not understood, the Book of Genesis also presented an appealing scenario!

There is of course a stubborn attachment to the idea that the implements used by all human languages — extinct and extant — are equally developed. However charitable the intention may be, such an assumption makes as much scientific sense as someone who would equate the level of development of Caesar's arsenal with that of Schwarzkopf's or the technology used by the natives of the Amazon Valley with that of the Silicone Valley (for a concurring view, see Ferguson 1984: 162). The reason why linguists have fallen into such an embarrassing trap is because linguistic features have not been properly evaluated. When you cannot tell the developmental differences between sharks and dolphins, you call them both fishes and assume that they are ad hoc variants of a universal model.

It is fair to say that the evaluation of linguistic features is not an easy task. Chomsky was on the right path with his markedness theory (Chomsky and Halle 1968: 400-35), but the promise it once held has not been fulfilled. This paper does not pretend to have all the detailed answers, but it has a clear idea about the problem: linguistic features, must not be seen as purely fortuitous mental objects, but also in terms of their neurological underpinning, and it is that layer that should be investigated because that is where the answers are found.

It is a trivial axiom to consider the Engl. *head* and the Fr. *tête* as two equally arbitrary denominations of that capital body part, and assume that there

is no advantage in using one instead of the other, but alternatives are not always on a par with each other. Chomsky and Halle compared two hypothetical languages of which one would have the vowels *i, e, a, o, u* and the other *y, ö, a, Λ, and ɔ* (those of Fr. *but, boeuf, bat*, Engl. *but* and Ru. *byt'*) and concluded that the first set would be more "natural" (1968: 402). The term *natural* expresses a qualitative value, and runs the risk of being dismissed as an ethnocentric judgement. What is indisputable, though the evidence remains circumstantial for the time being, is that the neurological underpinning of the latter set is more complex, and for that reason it is more advantageous for languages to have the first set. Therefore, arbitrariness and universal parity do not apply to everything — some features are more advantageous than others (for the differential cerebral treatments of word retrieval and grammar-rule application, see Fitzgerald 1992: 7).

The direct observation of what makes an item more or less advantageous than another, is not possible in the present state of the art. Even the PET-scanners, the most advanced instruments for the observation of cerebral activities, cannot provide the graphic evidence that would be necessary to show that *y* and *ɔ* are neurologically more complex than *i* and *u*, respectively. There is however a reliable indicator. One may surmise that the quicker a skill is learned, the simpler its neurological underpinning is. Therefore, if under normal circumstances children learning their native languages acquire *i* significantly before *y*, or *u* before *ɔ*, while both elements of each pair are regularly represented in the target language, one may rightly conclude that the neural networks that are responsible for the production of *i* and *u* are simpler than those of *y* and *ɔ*. Such time lags have indeed been consistently observed: *i* and *u* are acquired well before the age of two, *y* and *ɔ* well after (See Grégoire 1937: 247 and Timm 1977: 336, 338).

In the foregoing, I have implicitly equated neurological simplicity with advantage. It is true, of course, that this equation only holds when all other things are equal. Sawing a piece of wood may be achieved with a simpler neural network than playing a violin concerto, but since the skills are not comparable, comparing their respective neural networks is hardly a rational exercise. In the above linguistic example, however, all other things are equal — both sets of vowels allow the same types of syllable structure and exactly the same number of combinations. In such circumstances, where the functional yield is constant, the feature with the simpler production method is the more advantageous one.

Having argued that the complexity of the neurological underpinning is an evaluation criteria of linguistic features — the simpler the neural pathway, the more advantageous the feature — and having pointed out that language acquisition is a reliable indicator of the neurological underpinning — the earlier the mastery the simpler the synaptic network, I shall now present data suggesting that in the history of languages the developmental changes have proceeded along a specific line, which can be defined and explained in terms of neurological underpinnings.

Those who profess that the features of all languages are equally developed assert that the developmental changes occurred when our species was acquiring the potential for speech, but that the process stopped when verbal communication became coded in our genes (Pinker and Bloom: 1990). This is a very partial view. Of course, at some point of our phylogeny the cerebral areas that are necessary for speech did become part of our morphology (See Tobias: 1991), but the data

from historical linguistics clearly demonstrate that evolution did not stop there, certainly not at the linguistic level and probably not at the biological one.

The evolution of languages can be easily observed in the Indo-European family, which has the longest and most intensively investigated history. In these languages, a single functional vowel combined with laryngeal sounds gave way to a complete set of long and short vowels, with quantity yielding subsequently to a new set of qualitative distinctions. In a parallel move, consonants shifted from a lopsided set made almost exclusively of stops differentiated with secondary and tertiary articulations to a set more evenly distributed among simple stops and plain fricatives. Verbal distinctions turned from a modo-aspectual model to a predominantly temporal one, while the active : passive dichotomy supplanted the internal : external diatheses. In morphology, stem vowel alternation lost ground to suffixation, whose markers in turn have been extensively replaced with free morphemes. In syntax, the earlier ergative or, perhaps before that, active (*vs* stative) sentence structure was recast into a nominative mold as the cognitive categories of agent and patient were adapted into the mentally-conceived functions of subject and object. The original head-last order of constituents, probably another case of "cognitive grammar" has been or is being turned around into its better processable mirror image. Finally, sentence embedding developed and largely replaced less flexible implements, such as participles and other verbals.

While these changes are indeed easy to observe in the Indo-European languages, it is not implied that they have proceeded at the same rate everywhere. The occurrence of many of them is also common in the non-Indo-European languages (See Bichakjian: 1991), though our even more imperfect knowledge of their histories — many of them do not have a written tradition — and their being in some cases in different developmental phases makes it difficult to observe the exact same changes in all language families. The changes from amphibians to reptilians, the development of birds and the phylogeny of primates may not be exact duplicates, but they belong to the same evolutionary process, because the mechanisms were identical in nature, and the principle was the same.

In linguistics, the evolutionary changes also have the same source and obey the same principle. When, to the extent of the availability of psycholinguistic data, one compares the acquisitions of the input and output of the developmental changes listed above, one discovers that the outgoing items — sounds or strategies — were always acquired late, while the incoming ones are mastered significantly earlier (for a detailed discussion and the supporting bibliographical references, see Bichakjian: 1988). Since I argued above that early acquisition is an indication of a simpler neurological underpinning, it now becomes apparent that languages have evolved by improving their implements in two important ways — they have made them more functional and neurologically less costly. The evolution of languages is repeated today by word processors: they perform more and require less effort.

Having substantiated the existence of developmental changes in linguistics and having defined the direction in which they proceed, I shall now go on to the biological part. If linguistic implements are acquired earlier and earlier, the cerebral plasticity that makes such a mastery possible must also have become an ever more precocious growth. How the genetic material coding for the ability to use languages relates to the growth of Broca's and Wernicke's area has not been

elucidated in detail, but we know that the genetic correlates exist (See Gopnik: 1990 and Gardner: forthcoming), and it is a basic fact of molecular biology that the growth of an organ is made possible, not only by the structural information coded in the DNA, but also by the regulatory genes that control the timing and the rate of that growth. It is therefore quite consistent with the known facts of molecular biology and developmental neurology to surmise that the evolution of languages towards earlier acquired implements is related to an ever more precocious plasticity of the corresponding cerebral areas and thence to a change in the regulation of the biochemical events that are responsible for the necessary synaptic connections. This surmise is all the more legitimate since the development of human morphology and human behavior are explained through such a change of regulation, called *neoteny* (See Gould: 1977 and Lorenz: 1971).

When the linguistic developments are studied along with their neurological underpinnings and the molecular actions that control their growth, language evolution becomes just an ordinary evolutionary process. It is activated at the molecular level, and it proceeds in the direction of ever more advantageous features. Early-acquired features are indeed more advantageous, because the corresponding neural pathways are simpler and therefore stronger, which makes them impervious to accidental impediments and degenerative erosion. Early-acquired features also mean earlier linguistic proficiency, which in turn contributes to an earlier and better acquisition of social skills and an earlier and richer mental development (for a more detailed discussion, see Bichakjian: 1992).

Like the morphological and ethological evolution of humans, language evolution is therefore a neotenous process, *i.e.* a shift to earlier and *ipso facto* more advantageous features, and it is this process that is common to all languages, independently of the actual form of the ongoing developmental changes.

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LES ORIGINES DU LANGAGE HUMAIN

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1. INTRODUCTION

Beaucoup d'études sur l'origine du langage humain pèchent sur deux points: Elles supposent que le langage est né d'un seul processus évolutif, et elles négligent son côté réceptif. Cette contribution part de deux hypothèses destinées à remédier à ces faiblesses:

- 1° La naissance du langage est due à l'union de plusieurs lignes évolutives.
 - 2° Dans l'évolution du langage, la perception précède la production.
- La première hypothèse est basée sur la notion de **design feature**, développée par C. F. Hockett (1960), selon laquelle le langage est caractérisé par un certain nombre de "traits de construction" qui, du point de vue de l'évolution, sont indépendants les uns des autres. Cette contribution se concentrera sur deux traits: la faculté de l'homme de percevoir et de produire rapidement des séquences très compliquées de sons assez différents les uns des autres, et la fonction du langage de rendre possible l'expression et la modification non pas d'états émotifs ou motivationnels (fonction de la plupart des systèmes sémiotiques chez les autres animaux), mais d'états cognitifs, c.-à-d. mnésiques.

2. DEUX LIGNES DE L'EVOLUTION DU LANGAGE

2.1. Ligne physique

Chez la plupart des humains on observe une double asymétrie fonctionnelle du cerveau:

- 1° Ils sont droitiers, c.-à-d. que leur main la plus adroite est contrôlée par des aires du cortex de l'hémisphère gauche de leur cerveau – en effet, la plupart des organes périphériques sont contrôlés par l'hémisphère contralatéral.
- 2° Pareillement, la production et la perception des signes linguistiques sont, chez eux, contrôlées par des aires du cortex de l'hémisphère gauche, notamment le centre de Broca, centre moteur situé au pied de la troisième circonvolution frontale, et le centre de Wernicke, centre sensoriel situé sur le bord supérieur du lobe temporal. Cela n'est pas seulement vrai des signes phoniques, mais, en principe, aussi des signes graphiques et même des signes gestuels des sourds-muets.

On a fait un bon nombre de propositions pour expliquer les fonctions de ces asymétries (voir Bryden 1982: 104-108). A mon sens, les propositions les plus

convaincantes sont celles qui se réfèrent à la complexité des mouvements à contrôler (voir Figge 1990: 202-207). On peut, donc, considérer comme l'un des avantages de l'asymétrie fonctionnelle du cerveau humain

la spécialisation d'aires déterminées de l'un des deux hémisphères qui leur permet de soutenir efficacement le contrôle central des mouvements effectués par les doigts, la main et le bras contralatéraux et par des organes de la cavité bucco-pharyngienne qui impliquent des déplacements rapides et précis de ces organes et une coordination exacte d'un nombre élevé de groupes musculaires.

Mais ce n'est pas tout. Un autre avantage est

la spécialisation d'aires déterminées de l'hémisphère dominant qui leur permet de soutenir efficacement le traitement central de perceptions auditives caractérisées par des changements rapides et fortement variés de leurs spectres acoustiques.

La latéralisation du cerveau humain ne porte, donc, pas seulement sur les organes effecteurs, mais aussi sur la perception, c.-à-d. l'ouïe.

A côté des asymétries fonctionnelles on a observé des asymétries anatomiques et physiologiques (voir Bradshaw/Nettleton 1983: 21-30). Les asymétries les plus saillantes concernent le centre de Wernicke et son voisinage. Ce centre est situé en partie sur une structure cérébrale nommée *planum temporale*, qui est beaucoup plus étendue du côté gauche que du côté droit chez 65% des humains. L'inverse n'est vrai que pour 11%. Le bord supérieur du lobe temporal, où est situé le centre de Wernicke, forme le bord inférieur de la scissure latérale (scissure de Sylvius), qui est sensiblement plus longue du côté gauche et dont le bout arrière se situe à un niveau plus bas du côté gauche. Les deux asymétries anatomiques se font déjà voir dans le cerveau fœtal.

Dans la lignée des primates, les premières attestations d'une latéralisation cérébrale ne se rapportent pas au contrôle d'organes effecteurs, mais à la perception acoustique et à la configuration de la scissure de Sylvius (voir Bradshaw/Nettleton 1983: 17-19). Plusieurs expériences différentes faites avec des macaques japonais ont mis en évidence que chez ces animaux le traitement de la perception de certains aspects des vocalisations de leurs congénères est contrôlé par des aires de l'hémisphère gauche. L'asymétrie des scissures de Sylvius se trouve déjà chez les grands singes. Par contre, le témoignage le plus ancien d'un développement du centre de Broca du côté gauche n'a été fourni, en forme d'empreinte sur la face interne du crâne, que par un *Homo habilis* qui a vécu il y a environ deux millions d'années (Falk 1987: 111).

Quoique, du macaque à l'homme moderne, les attestations d'une latéralisation des facultés auditives ne forment aucunement une suite continue, elles peuvent servir de base à un scénario évolutif qui inclut la naissance de la faculté de la parole chez l'homme.

Tout comme d'autres sens, l'ouïe ne sert pas seulement à la création d'une représentation intérieure du monde extérieur, mais aussi à la structuration cognitive de l'espace environnant: L'oreille ne fait pas que percevoir les sons, elle sait aussi en localiser les sources. Un raffinement de cette dernière faculté dans le sens d'un traitement adéquat de séries de sons qui changent brusquement et de façon réitérée leurs qualités acoustiques est d'un avantage certain: Il permet, par exemple, de poursuivre avec l'oreille les bruits produits dans l'environnement par les mouvements d'un ennemi ou d'une proie. En outre, l'oreille s'est développée, chez les vertébrés, en parallèle avec les organes de la

cavité bucco-pharyngo-laryngienne, surtout le larynx. Quoique ces derniers soient, en premier lieu, des organes métaboliques, leur développement a rendu possible la production de vocalisations de plus en plus nombreuses et de plus en plus variées, qui exigeaient de l'oreille des efforts de plus en plus intenses. En somme,

la spécialisation d'aires déterminées d'un hémisphère cérébral déterminé dans le sens d'un support central du traitement d'événements acoustiques complexes – c.-à-d. changeant brusquement et de façon réitérée de leurs qualités spectrales – est d'un avantage sûr du point de vue du comportement spatial aussi bien que social.

Ces avantages peuvent expliquer pourquoi la réorganisation du cerveau qui mène à la faculté de la parole et à la supériorité de la main droite a débuté dans une région arrière du cortex cérébral.

La prochaine étape est l'extension, du côté gauche, de la faculté de contrôler des événements caractérisés par des changements abrupts à des régions antérieures, p. ex. le long du *fasciculus arcuatus* qui relie les centres de Wernicke et de Broca et qui aujourd'hui permet de répéter à haute voix des mots ou des phrases qu'on a entendus. Ce qui, dans ces régions, correspond à la faculté de traiter des événements acoustiques relativement nuancés et compliqués c'est la faculté d'effectuer des mouvements relativement fins et compliqués. Cette faculté s'est manifestée d'abord par l'usage et ensuite par la fabrication d'outils, à partir du début du paléolithique, il y a 2,5 à 2 millions d'années, chez *Homo habilis*. Il est, cependant, probable qu'en même temps elle s'est manifestée par des mouvements articulatoires permettant d'insérer des bruits consonantiques dans les vocalisations plus ou moins vocaliques héritées des ancêtres, les singes. Au début, ces nouvelles vocalisations n'ont probablement fait qu'enrichir le répertoire varié des signaux typiques des primates. Cela ne veut pas dire qu'elles n'auraient pas eu d'avantage immédiat. Au contraire, des vocalisations comportant des suites plus ou moins rythmiques de bruits tranchent bien sur les vocalisations des autres animaux ainsi que sur la plupart des bruits provenant de l'environnement. En résumé,

l'extension des facultés acquises par des régions arrière de l'hémisphère dominant à des régions antérieures a rendu possible un contrôle de plus en plus fin des doigts, de la main et du bras contralatéraux et des organes de l'articulation, permettant d'effectuer des mouvements qui impliquent des changements rapides et coordonnés dans la position de ces organes.

Les facultés articulatoires de l'homme moderne n'étaient, donc, au début que le résultat fortuit d'une nouvelle réorganisation du cerveau, dont l'avantage immédiat résidait dans la possibilité d'utiliser et de produire des outils.

2.2. Ligne sémiotique

En plus de leur singularité acoustique, les vocalisations structurées par différents bruits consonantiques présentent un autre avantage: Elles permettent beaucoup plus de différenciations que les simples cris. Elles sont, par conséquent, un moyen efficace d'exprimer des contenus différenciés.

Chez les primates subhumains la production de signaux (acoustiques et autres) sert à la manifestation d'émotions et de motivations; de cette façon, elle contribue au règlement de la vie en groupe. Il y a, cependant, aussi des formes rudimentaires d'un comportement sémiotique se référant à un savoir spatial.

Menzel a décrit les façons d'agir d'un groupe de chimpanzés dont l'un des individus connaît la localisation et d'autres caractéristiques d'un objet caché et essaie de communiquer ces connaissances aux autres membres du groupe moyennant toutes sortes de signaux pour les stimuler à le suivre (voir p. ex. Menzel / Halperin 1975). Il y a surtout les cris d'alarme et de nourriture qui se réfèrent à l'environnement. Des études particulièrement détaillées ont été faites sur les cris d'alarme du callitriché (*Cercopithecus aethiops*, voir p. ex. Seyfarth / Cheney 1982). Ces singes produisent trois cris différents pour attirer l'attention de leurs congénères sur l'approche ou la présence de trois espèces d'ennemis: l'aigle, le léopard et les serpents. Il a été démontré que ce qui est à la base de ces cris n'est pas l'excitation en face d'un danger, mais l'observation d'un événement dans l'espace environnant.

Il est évident que les possibilités vocales des singes ne permettent pas les différenciations qui correspondent aux différenciations de leur savoir spatial. D'autre part, le fait d'avoir à la disposition un moyen flexible d'exprimer des connaissances détaillées sur l'environnement présente un avantage sûr. Cela explique pourquoi le genre *Homo* a commencé d'utiliser les facultés articulatoires qu'il doit à un hasard évolutif à des fins expressives.

3. CONCLUSIONS

A l'origine du langage humain, deux lignes évolutives différentes se sont réunies:

- 1° une série de réorganisations du cerveau qui permettaient d'abord le traitement d'événements acoustiques hautement compliqués, et plus tard l'exécution de mouvements pareillement compliqués – les conditions physiques du langage,
- 2° la faculté fort restreinte d'employer des signaux variés pour transmettre des informations sur l'espace environnant ou, en termes plus généraux, pour manifester des portions de mémoire – la condition sémiotique du langage.

Il est évident que la rencontre d'un mode d'expression flexible et d'un contenu différencié à exprimer présente un avantage considérable.

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GREEK KOSMOS "ORDER, ARRANGEMENT"
AND INDO-EUROPEAN POETICS

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Current etymological dictionaries differentiate Greek kosmos "order, arrangement" more or less sharply from Vedic Sanskrit sáṃs- "recite, sing, praise", Avestan sanh- "declare, teach, decree", and Latin censeo "opine, decree, assess". Watkins (1985: 29 and 30), for example, lists English censor, census, and recension (derivatives from Latin censeo) under *kens-, but cosmos, macrocosm, and microcosm (all from Greek kosmos) under *kes-. In doing so, Watkins is basically following Pokorny (1959-1969: 1.566), who lists the Sanskrit, Avestan, and Latin words (along with Old Persian, Albanian, and Slavic forms meaning "speak, say" and some Oscan forms which are closely related to Latin) under *kens-; Greek kosmos, however, seems to be mentioned by Pokorny (1959-1969: 1.741) only under *meu-, the source of Latin mundus "ornament, world", with senses parallel to Greek kosmos. Many other etymological dictionaries pursue a similar course. Mayrhofer (1956-1980: 3.284-285), for example, while mentioning important poetic evidence connecting Sanskrit sáṃs- and Avestan sanh-, specifically separates kosmos from these words; Frisk (1960-1972: 1.929-930) lists *kens- as only one possibility for the source of the Greek word, and Ernout-Meillet (1959: 112-113) do not mention kosmos in discussing *kens-.

Phonologically, though, there is no real problem. The derivation *kons-mos → kosmos is presented by Lejeune (1972: 138-139) without demurral, and Chantrelle (1968-1980: 570-571), while expressing some caution about the phonology, also regards the *kens- family as the best location for the Greek noun.

There is also no real semantic difficulty, for although most of the forms outside of Greek can readily be described as having a core meaning "speak", the Latin (and Oscan) forms suggest that this could have been secondary. The idea of arranging or categorizing

is prominent in Latin censeo "assess, etc." and census "registration by property classes". Consequently, the note of solemnity vis-à-vis speech, present in the Sanskrit and Avestan derivatives and reflected in Watkins' (1985: 29) gloss of *kens- as "to proclaim, speak solemnly", could be a natural development from "arrange (well)", used with a word meaning "words, speech"; the Greek noun kosmos, on the other hand, would maintain the meaning "arrange", while the Old Persian, Albanian, and Slavic derivatives could come from the combination "arrange words", with an attenuation of meaning to simply "speak, say".

Nor is the association of the root *kens-, so defined, with "words, speech" merely hypothetical; rather, both kosmos in Greek and derivatives from *kens- in Indo-Iranian are often used in conjunction with the root *wekw- "speak".

A Greek example is Solon 1.2 (West). His fellow-Athenians, having often been defeated by Megara when fighting over Salamis, passed legislation forbidding any further discussion of the matter (so Plutarch, Life of Solon, 8). Solon, however, circumvented this by composing a poem which began as follows:

autos kérux elthon aph' himertēs Salaminos,
kosmon epeon ōidēn ant' agorēs themenos.

"I myself as herald have come from lovely Salamis,
putting together (themenos) an arrangement of
words--song instead of prose".

Pretending to be crazy, Solon recited this poem to his compatriots, and the ploy was successful, as Athens renewed the struggle with Megara and took Salamis.

Several later authors, viz., Parmenides 8.52 (Coxon), Democritus 21 (Diels-Kranz), and Philetas 10.3 (Powell), also combine kosmos with epeón "of words". Parmenides, for example, as he proceeds from the idea that Being cannot change to the apparently contradictory stance that natural phenomena can be described in terms of change, uses the phrase kosmon emón epeón apatélon "arrangement of my words (which is) deceptive".

Turning to Avestan, we find a juxtaposition of *wekw- with sanh- in the combination vacá sənḡhāmahi "we teach words" (Insler 1975: 37), used at Yasna 31.1 in a context of overcoming lies; naturally, in this Zarathustrian text, falsehood is presented as the polar opposite of truth, rather than as possessing the underlying efficacy evinced by the success of Solon's ploy of pretended madness or Parmenides' use of a "deceptive arrangement of words" at a difficult transition in his argument.

Sanskrit sáms- is also used with derivatives from *wekw- (cf. Mayrhofer 1956-1980: 3.285). Examples with uktham "hymn" are Rig-Veda 4.51.7, 7.19.9, 7.31.2, 8.1.1, and 10.72.1. Two of these, 4.51.7 and

7.31.2, recall Yasna 31.1, as they associate Usas and Indra respectively with truth, while 10.72.1, which presents song as a way of getting around apparent difficulties raised by existence and non-existence, is uncannily reminiscent of Parmenides. Additionally, three passages, Rig-Veda 5.39.5, 6.5.6, and 8.8.11, combine vacas "word, speech, song" with sáms-. Not only are these important as containing vacas (exactly cognate with Greek epos and Avestan vacah-), but they also incorporate the idea of ornamentation, which fits nicely with the postulated root meaning of *kens- as "order, arrange". At 8.8.11, for example, the phrase vaco 'sámsit "he has sung a song" immediately follows a reference to the Aśvins' chariot, here described as sahasranirnijā "having 1000 ornaments".

But do we have an inherited pattern in these various combinations of *wekw- with other words? On the Greek side, the likelihood of this is indicated, not only by Solon 1.2, etc., previously discussed, but also by Homer's usage of kosm-. His martial subject matter results in many instances of both the noun kosmos and the verb kosmeō in the sense "arrangement (of troops)" or "arrange (troops)", as at Iliad 2.126, 476, 704, and 727, and such passages imply the idea of speaking, inasmuch as the marshalling of troops is accomplished verbally.

There are also three Homeric passages, viz., Iliad 2.213 and Odyssey 8.179 and 14.363, which make an explicit connection of kosm- with *wekw-. At Iliad 2.213, for example, Thersites' harangue of the Achaian assembly is referred to as epea akosma "disordered words". Since Thersites is flouting the traditional restraints on speech (as observed by most other characters in the Iliad) when he rails against Agamemnon as a bad leader whom the Achaians have no obligation to obey, we have a pattern reminiscent of Solon's disregarding the Athenian law which forbade discussion of Salamis. Of course, there is the difference that kosm- is here negated by a-. This does not, however, vitiate the potential significance of the combination of kosm- and *wekw-, in view of the fact that Homer's use of traditional formulas and/or myths is often subtle and idiosyncratic; for the general principle, vis-à-vis formulas, cf. Floyd (1980) and for myths, Slatkin (1991). Moreover, in the case of Thersites, we should remember that, however negatively he is presented in the narrative of Iliad, Book 2, his arguments concerning Agamemnon are actually similar to those offered by Achilleus, the hero of the poem.

Often, an investigation of etymology reveals unexpected twists in semantic development, as in the extension of the meaning of Latin mundus from "ornament" to "world", on the model of various meanings of Greek kosmos. Often, though, an underlying appropriateness emerges as one considers the individual

histories of words, and this is the case with *kens-. Its English derivative census is as typically Roman as cosmos is Greek, with the one showing a practical and political emphasis, while the thrust of the other is more theoretical. Sanskrit and Avestan too, as we have seen, contribute to the overall picture, for along with instances of Greek kosmos, juxtaposed with *wekw-, their various uses of *kens- with *wekw- attest to an Indo-European pride in well-ordered speech. In Rig-Veda 8.8.11, for example, this is shown by an association of the combination of yacas and sáms- with the Áśvins' richly decorated chariot. Other Vedic, Avestan, and Greek passages refer or allude to well-ordered speech as being efficacious in supporting the cause of truth (Rig-Veda 4.51.7 and Yasna 31.1), or in dealing with political (Solon 1.2) or military (Iliad 2.213) incompetence or problems of being and non-being (Rig-Veda 10.72.1 and Parmenides 8.52). From all of these, it emerges that an etymology which phonology alone is not quite sufficient to establish is rendered more likely by poetic considerations.

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THE PROSODIC BASIS OF WACKERNAGEL'S LAW

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One of the most important achievements of contemporary syntactic research is the inclusion of intonation in the interpretation of sentence structures. As a result, attention has been shifted from "constructional" phenomena such as agreement or word order to "segmentational" phenomena. Crucial to understanding the phenomenon of segmentation is the idea that words and sentences are the basic units of linguistic structure. Whereas the word is the basic constructional unit, the sentence is the locus of segmentational phenomena. Sentence segmentation is the division of a sentence in one or more segments comprising one or more words or word groups. Segments are characterised by a prosodic contour and separated by a potential pause. Segmentation allows the speaker to articulate the semantic content of a sentence by focusing on the salient points of development in a topic.

For obvious reasons, the concept of sentence segmentation is only rarely encountered in syntactic analyses of "dead" languages. Yet the practice of classical colometry presupposes some notion of segmentation. Thus, the Alexandrian grammarian Dionysius Thrax (2nd c. BC) affirms that one of the functions of punctuation marks (*στιγματά*) is to give the sentence rhythm by dividing it into breath (*πνεῦμα*) groups. Even more important is his mention of the pause (*διαστολή*), the function of which is to mark off sense (*voūς*) groups.

The concept of sentence segmentation may throw some fresh light on a well-known problem of comparative Indo-European grammar, viz. the position of enclitics. In the Greek of the Gospels, enclitics normally come after the word with which they are construed, as in the following example:

- (1) οὐ πίστις σου σέσωκέν σε (Mk 10.52 = Mt 9.22 = Lk 7.50)
"your faith has saved you"

From a constructional point of view, the postposition of the enclitic personal pronouns (EPPs) *σου* and *σε* may be considered the "natural" order, because their syntactic dependence harmonises with their phonological dependence, enclitics being phonologically dependent on a preceding word with which they form a more or less complete phonological unity. Moreover, interference of the Semitic substrate languages reinforces the postponing of EPPs that correspond to pronominal suffixes in Aramaic and Hebrew. In New Testament (NT) Greek, postposition of EPPs is by far the most frequent order. Consider, for instance, the last words of Jesus, which are rendered in Aramaic in the majority of manuscripts:

- (2) אלהי אלהי למה שבקתני
ελωι ελωι λεμא σαβαχθאו (Mk 15.34 = Mt 27.46)

In Mark's verbatim translation, the enclitic personal pronouns are all postposed:

- (3) δὸς θεός μου # δὸς θεός μου # εἰς τί ἐγκατέλιπες με (Mk 15.34)
"my God, my God, why have you forsaken me?"

Now compare Matthew's version:

- (4) θεέ μου # θεέ μου # ἵνατι με ἐγκατέλιπες (Mt 27.46)

In (4), the EPP *με* is preposed vis-à-vis the verb in accordance with "Wackernagel's Law" (Wackernagel: 1892). Its position has been defined as "clausal second", i.e. after the first word of the (main or subordinate) clause. Wackernagel's Law is one of the few generally accepted syntactic rules of comparative Indo-European grammar. Compare, e.g., the Gothic translation of (2):

- (5) *gup meins* # *gup meins* # *duhwe mis bilaist* (Mk 15.34 = Mt 27.46)

Of course, Wackernagel's Law need not necessarily conflict with what I have just called the "natural" order, as in the second example of the following minimal pair, where the EPPs *μου* and *me* are postposed in relation to the verb on which they depend, while at the same time taking up clausal second position:

- (6a) τίς μου ἤψατο (Mk 5.31)
"who touched me?"

- (6b) Ἠψατό μου τίς (Lk 8.46)
"someone touched me"

Compare also the Gothic (7) and Latin (8) versions of (6a) and (6b):

- (7a) *hwas mis taitok*

- (7b) *taitok mis sums*

- (8a) *quis me tetigit*

- (8b) *tetigit me aliquis*

The question is, of course, under what circumstances Wackernagel's Law precedes the "natural" order. In this respect, the NT Greek evidence is of particular importance, precisely because of the pressure of the substrate languages,:
The postposition of *σου* in (9a) is many respects "natural". It matches the Semitic pattern and the order has become obligatory in Modern Greek. Not surprisingly, then, postposition of genitive EPPs vis-à-vis nouns is by far the most frequent order in NT Greek. So what might have induced the preposition of *σου* in (9b)?

If I have just said, that postposition of EPPs is somehow "natural", because it harmonises their syntactic and phonological dependence, it stands to reason to take a look at the words to which they attach themselves if they are preposed vis-à-vis the word on which they depend. In (4) and (6a), the first word is an interrogative. In (9b), it is a verb in the imperative mood. It turns out that Wackernagel's Law applies frequently in the presence of an interrogative. Consider, e.g., (10a), with preposed *με*, and (10b), with a postposed nominal group:

- (10a) τί με πειράζετε (Mk 12.15 = Mt 22.18)
"why are you proving me?"

- (10b) τί πειράζετε τὸν Θεόν (Ac 15.10)
"why are you proving God?"

Compare the Gothic (11) and Latin (12) versions of (10a) as well:

- (11) *hwa mik fraisiþ*

- (12) *quid me tentatis*

In the presence of an imperative, Wackernagel's Law applies frequently as well. The only cases of preposed EPPs which are dependent on an imperative involve negative particles or nominative PPs, as in the following examples:

- (13) μή μου ἀπτον (Jn 20.17)
"don't touch me"
- (14) σύ μοι ἀκολούθει (Jn 21.22)
"you follow me"

Even if the verb is not in the imperative mood, the presence of negative particles and nominative pronouns, personal or other, triggers Wackernagel's Law:

- (15) οὐ μή σε ἀπαρνήσομαι (Mk 14.31 = Mt 26.35)
"I will never disown you"
- (16) οὐδείς σε κατέκρινε [...] οὐδὲ ἐγώ σε κατακρίνω (Jn 8.11)
"has no one condemned you? [...] then neither do I condemn you"

Compare also the following examples from Old Persian (Hale 1988: 29, 34):

- (17) *nai [šim] ima varnavātaiy* (DB 4.49)
"it does not convince him"
- (18) *mā taiy [durux]jam þadaya* (DNB 52)
"let that not seem false to you"

What these examples have in common, is the presence of words which by their very nature tend to be focalised and occur frequently in clausal first position. It would seem that the presence of such "emphatic" words attracts EPPs in clausal second position. This is not only the case of words which are, so to speak, emphatic by nature, but also of other focalised words:

- (19) εὐχαριστῶ σοι # δτι ἤκουσάς μου [...] ἐγὼ δὲ ἤδειν # δτι πάντοτε μου ἀκούεις # ἄλλὰ εἰπον [...] # ἵνα πιστεύσωσιν # δτι σύ με ἀπέστειλας (Jn 11.41-42)
"I thank you that you have heard me [...] I knew that you always hear me, but I said this [...] that they may believe that you sent me"

In this example, ἤκουσάς is focalised, as God's hearing is the reason for Jesus' words of gratitude, hence the topic of the pericope. The addition of πάντοτε in the fourth clause, however, constitutes a salient point of development in the topic. The fact that πάντοτε is focalised has triggered Wackernagel's Law. The final clause again involves a focalised nominative PP. According to Hale (1988: 29-30), topicalization is also at work in the following examples from Old Persian:

- (20) *xšaçam šim adam adīnam* (DB 1.59)
"the kingdom I took from him"
- (21) *Auramazdā maiy upastām abara# utā ani[yāha ba]lgāha* (DB 4.60)
"Auramazda bore me aid, as did the other gods"

Whereas Wackernagel's Law suffices to explain the preposition of EPPs in the above examples, it cannot account for those instances of preposed enclitics which do not occur in clausal second position. A number of these can be subsumed under Wackernagel's Law, if the notion of clause is not restricted to main or subordinate clauses, but includes participial and infinitival clauses as well:

- (22) σὺ δὲ νηστεύων # ἀλειψάσι σου τὴν κεφαλὴν # καὶ τὸ πρόσωπόν σου νῆψαι (Mt 6.17)
"But you, when fasting, anoint your head and wash your face"
- (23) ἐν τῷ λέγειν αὐτὸν ταῦτα # ἐπάρασά τις φωνὴν γυνὴ ἐκ τοῦ δχλου # εἶπεν αὐτῷ (Lk 11.27 §⁷⁵ B)
"as he was saying this, some woman in the crowd raised her voice and said to him"

The majority of manuscripts have the positions of φωνή and γυνή interchanged in order to juxtapose the indefinite pronoun τις and γυνή. As it stands, the sequence γυνή ἐκ τοῦ δχλου in (23) could be considered appositional to τις.

If Wackernagel's Law is not defined in terms of clausal position, but instead in terms of segmental position, a more plausible generalization of the phenomenon emerges. Consider, for instance, the following example:

- (24) ιδού # τὰ ἡμίσια μου τῶν ὑπαρχόντων # κύριε # τοῖς πτωχοῖς δίδωμι (Lk 19.8)
"look, half of my possessions, sir, I give to the poor"

The position of the EPP μου in (24) is remarkable, as the nominal group could be interpreted as "my half of the possessions", which is obviously not what is meant. If the particle ιδού, which corresponds to the Hebrew פָּנִים, is taken as a separate segment, the preposition of μου becomes perfectly natural, as ἡμίσια is clearly focalised. If καὶ νῦν in the following example is taken as a segment as well, the position of με is again in consonance Wackernagel's Law (note the postposition of the nominative PP σύ in the presence of the imperative δόξασον):

- (25) ἐγώ σε ἐδόξασα ἐπὶ τῆς γῆς [...] καὶ νῦν # δόξασόν με σύ # πάτερ # παρὰ σεαντῷ (Jn 17.4-5)
"I have glorified you on earth [...] and now # you must glorify me, father, in your presence"

Hale (1988: 35-36) reports a similar phenomenon ("parenthesis") in Old Persian:

- (26) *vašnā [Aurā]mazdāha # adam šiš ajanam* (DB 4.6)
"by the will of Auramazda, I slew them"

There is another category of words which readily attract enclitics in clausal second position, viz. subordinating conjunctions like εἰ, ἐάν, ἵνα, ὅταν, μήπως, etc., with the notable exception of "recitative" δτι (19). One example must suffice:

- (27) ἐάν τις μου τὸν λόγον τηρήσῃ (Jn 8.52 ψ⁶⁶ (D) Lpc)
"if anyone keeps my word"

In Greek, as in Indo-European, clausal second position was the preferential position for a number of particles, such as μέν, δέ, γάρ, οὖν, ἀν, etc., the enclitic nature of which is disputed. Because of their typically enclitic-like syntax (note, e.g., the internal make-up of ἐάν, ὅταν, μήπως, etc.), these particles have been called "quasi-enclitics" (Wackernagel 1892: 371). To conclude, consider the following example, with the quasi-enclitic particle μέν in clausal fifth (!) position:

- (28) καὶ ὑμεῖς οὖν # νῦν μὲν λύπην ἔχετε # πάλιν δέ δψομαι ὑμᾶς
καὶ χαρήσεται ὑμῶν ἡ καρδία (Jn 16.22 ψ^{5.22vid.66} κ² B C^{*} D α)
- "and so with you, now you are grieved, but I will see you again, and your heart will rejoice"

The grief of the Apostles (ὑμεῖς) over the imminent death of Jesus is compared to the grief of a woman in labour. In the second segment, νῦν is focalised in contrast with πάλιν in the following, which explains the position of μέν. The majority of manuscripts (Α C³ Θ Ρ) have the order of νῦν and λύπην interchanged, thus focalising λύπην as compared to χαρήσεται (with preposed ὑμῶν).

The generalization of Wackernagel's Law can now be formulated as follows: *(quasi-)enclitics are either placed after the word on which they depend syntactically or they are placed after the first word of the sentence or a segment there-of, particularly if this word is a subordinating particle or if it is focalised.*

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PHONOLOGIE DIACHRONIQUE À PROPOS DE DEUX HYPOTHÈSES

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Dans le cadre restreint de cette courte communication, je me concentrerai sur deux des théories du changement langagier: l'une, globale et qui dépasse d'ailleurs le domaine linguistique — il s'agit de l'hypothèse de Zipf, appelée "loi du moindre effort" — , l'autre, plus spécifique, celle d'A. Martinet (1) qui, dans le prolongement de Zipf, rattache l'économie des changements phonétiques au rendement fonctionnel des oppositions phonologiques.

Je poursuis depuis plusieurs années une recherche sur l'évolution phonologique du latin ancien à partir d'un corpus préclassique (2e s. av. J.C.) de 2000 lignes comparé à un état plus ancien (d'environ 800 ans) de ce corpus, reconstruit sur la base de la méthode et des résultats acquis de la grammaire comparée des langues indo-européennes. Cette recherche a abouti à un premier tome (2) présentant une analyse statistique comparative des occurrences de phonèmes, de séquences consonantiques et de syllabes dénombrées dans chacun des deux corpus. L'exposé que je vais présenter se base largement sur ces données.

Commençons par l'hypothèse de Zipf, que je simplifie au maximum, en la réduisant au domaine phonique: la tendance générale du locuteur est d'économiser sur la fréquence des occurrences phoniques pour produire un même signifié. La comparaison de mes deux corpus confirme cette hypothèse. En effet, le nombre global d'occurrences de phonèmes est, dans le corpus plus ancien, de 90637 unités, alors que, dans le corpus latin attesté, il n'est plus que de 77433 unités, ce qui signifie une économie d'effort, pour le même message, de plus de 14%. Je ne commenterai pas davantage ce résultat et je passe immédiatement à la thèse générale reliant l'économie au rendement fonctionnel des oppositions; j'examinerai ensuite l'hypothèse plus "pointue" du rôle joué par le *degré* de rendement dans le maintien, l'accroissement ou, au contraire, la perte d'une opposition.

Pour ce qui concerne la thèse générale, j'ai calculé le pourcentage comparatif de ce rendement dans chacun des deux corpus (j'en fournirai le détail dans le vol. 19, 1993 de la revue *Langues et linguistique*). En voici les

résultats. Dans le corpus reconstruit, les possibilités d'opposition vocalique dans les paires minimales touchent 8198 occurrences de mots sur 35842, soit 22,87%; dans le corpus latin, ces possibilités touchent 19870 occurrences sur 32623, soit 60,90%. Nous constatons donc un gain global de 38,03% de possibilités de rendement. Si l'on cherche non pas pourquoi, mais comment s'est réalisé concrètement ce gain, les faits nous montrent que a) l'opposition s'est maintenue sous sa forme ancienne dans 3774 occurrences, soit 19% (p.ex. *is* "lui" * *es* "sois"); b) qu'elle s'est maintenue par transphonologisation dans 4536 occurrences, soit 22,82% (p.ex. /o/ * /a:/ dans le type **ekvons* * **ekvāns* est devenu /o:/ * /a:/ dans le plus récent couple *equōs* * *equās*) et c) qu'elle est apparue dans des paires anciennement non minimales dans les 11560 autres occurrences, soit 58,18% (p.ex., dans lat. *nāvi* * *nōvi*, de **na:veyey*/**gno:vay*, ou encore dans *senī* * *sonī*, de **seney*/**sveni*). Dans les types de cas b) et c), il me semble que l'origine du changement est surtout phonétique, c'est-à-dire physiologique (les changements ayant abouti au système vocalique latin sont tous combinatoires), puis, pour une part non négligeable, analogique ou liée à l'emprunt, et, finallement, très peu téléologique. Par exemple, comment expliquer par une motivation autre que la loi du moindre effort, dans un type d'opposition très fréquent comme les finales *-oys (datif plur. masc.) * *-ays (datif plur. fém.) le passage à la forme neutralisée -īs? Ce qu'on peut dire, c'est que le *maintien* de ce résultat ambigu est dû au contexte éclairant, situationnel, contextuel ou syntaxique, et ne relève pas de la phonologie (fonctionnelle).

Examinons maintenant l'hypothèse plus "pointue". Ma recherche sur ce point a été suscitée par un article de Robert D. King (3) qui, à partir de l'examen de l'évolution phonétique de diverses langues germaniques, aboutit à la conclusion que la charge fonctionnelle, oppositive, d'un phonème n'a pratiquement rien à voir avec le maintien, l'augmentation ou la diminution de ces oppositions. J'ai donc déterminé par commutation, dans mes deux corpus, le nombre des oppositions auxquelles pouvaient donner lieu, sur le plan vocalique, les quelque 20000 occurrences de mots qu'ils comportent chacun. Sur base de la moyenne des pourcentages de chaque type d'opposition (p.ex., /a/ * /ā/), je considère comme inférieur à la moyenne un pourcentage de moins de 1% (1er groupe) et donc comme supérieur à cette moyenne un pourcentage de plus de 1% (2e groupe). Or, sur 100 types d'oppositions, le corpus latin présente par rapport à son ancêtre 51% contre 29% dans le premier groupe, 49% contre 71% dans le second. Ce qui signifie que là où le rendement ancien était moindre, le latin a gagné 22% et là où ce rendement ancien était important, il en a perdu 22%, ce qui va à l'encontre de l'hypothèse proposée.

Mais j'admetts volontiers que ces résultats, même s'ils corroborent ceux de King, sont fondés uniquement sur le système vocalique d'une seule langue et sa reconstruction préhistorique. Il y aurait donc lieu d'étendre la vérification de l'hypothèse à d'autres corpus, plus larges et mieux documentés.

Mes conclusions les plus positives sont a) que mes données confirment largement, - par la diminution des occurrences de phonèmes et l'accroissement du rendement de leurs oppositions - le principe général, soutenu par A. Martinet, de l'économie fonctionnelle du système, et b) qu'elles m'incitent à répondre "*Progress*" à la question posée par le titre du livre de Jean Aitchison: *Language Change: Progress or Decay?* (4)

NOTES

- (1) Martinet, A. (1970), *Économie des changements phonétiques*. Traité de phonologie diachronique. Bibliotheca Romanica, Berne, 3e éd., pp. 54 ss. *Évolution des langues et reconstruction*. PUF, 1975, pp. 64 ss. Voir aussi P. Kiparsky (1982), *Explanation in Phonology*, Publications in Language Sciences, Foris Pub. Holland. Va dans le sens de Martinet, malgré l'appartenance à une tout autre école.
- (2) Maniet, A. (1990), *Phonologie quantitative comparée du latin ancien*. Bibliothèque des Cahiers de l'Institut de linguistique de Louvain, Louvain-la-Neuve, 393 p.
- (3) King, R.D. (1965), Functional Load and Sound Change, repris dans *Readings in Historical Linguistics, Chapters in the Theory of Sound Change*, éd. Ph. Baldi et A. Werth (1978), Pennsylvania State Univ., pp. 190-217. Mais voir J.C. Catford, Functional Load and Diachronic Phonology, dans *The Prague School and its Legacy...*, éd. Y. Tobin, Amsterdam-Philadelphie, 1988.
- (4) Fontana Paperbacks, The Chaucer Press, Bungay, 1981.

L'HYPOTHESE D'UNE PARENTE GENETIQUE DU CHINOIS ET DE
L'AUSTRONESIEN: PREUVES LEXICALES

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1. L'hypothèse d'une parenté génétique entre le chinois archaïque (ChA) et le proto-austronésien (PAN) est appuyée par des correspondances phonétiques systématiques ainsi que par des faits morphologiques (à paraître, 1992). On en amène ici des preuves lexicales. Donnons d'abord les grands traits des correspondances phonologiques et morphologiques:

(1) les mots du ChA correspondent à la dernière syllabe des mots PAN; cette dernière syllabe coïncide avec la racine du mot PAN, si le mot en contient une (Blust 1988); (2) à l'initiale des mots chinois, les sourdes et sonores correspondent aux sourdes et aux sonores de l'AN; les sourdes aspirées du ChA correspondent en AN à des sourdes précédées d'une autre consonne; (3) à l'initiale et à la finale, les consonnes rétroflexes et palatales du PAN correspondent à des alvéolaires en ChA; (4) à la finale, PAN -q, -H correspondent à ChA -x; PAN -b, -d, -j, -g correspondent à ChA -mx, -nx, -nx, -gx; PAN -s correspond tantôt à -h, tantôt à -t ou -dh. (5) PAN -l, -r correspondent à ChA -n et -nx. (6) les consonnes médianes -j- et -r- du ChA sont des infixes, de valeurs proches des infixes AN -in- et -ar- respectivement: -j- forme des nominalisations non-agentives ou focalise un verbe sur son patient; -r- marque les noms pluriels ou collectifs, les verbes à sens répétitif ou d'effort, et les adjectifs intensifiés.

Nous utilisons la transcription ChA de Li Fang-kui (1971, 1976) malgré ses défauts: on retiendra que -d et -g finaux ne sont pas réels, et que la reconstruction de certaines initiales, en particulier coronales, est défectueuse: on indique entre parenthèses leur valeur réelle, selon la théorie de Pulleyblank-Yakhontov.

2. Parties du corps.

TETE	PANT	uluH	首 hr-j-əgwx (hl-j-)
CERVEAU	PHNT	punuq	腦 nəgwx
OREILLE	R	-neR (entendre)	耳 n-j-əgx
LANGUE	Demp	dilat (lécher)	舌 d-j-at (l-j)

OS	Demp	kukut (articulation)	骨 kwət
PIED	Dyen	bintiq (bas de la jambe)	止 t-j-əgx
CORPS	Demp	dagis (chair)	形 giŋ

Notes. TETE, CERVEAU: comparaisons proposées par Peyros et Starostin (1984), mais traitées par eux comme des emprunts AN en chinois. CERVEAU peut être ChA *nagwx: dans ce cas, la correspondance des voyelles est irrégulière. PIED: parallèle sémantique: 腳, chinois moderne "pied", a signifié "bas de la jambe" jusqu'au 3ème siècle de notre ère (Dong 1985). CORPS: Dempwolff "chair, viande", mais Toba Batak "corps".

3. Termes de parenté.

MERE	PANT	inah	女 n-rj-agx
PERE	Blu	embaq (grand' père)	父 b-j-agx

Notes. MERE: chinois *n-rj-agx "femme", mais souvent "mère" dans les inscriptions oraculaires.

4. Nature.

EAU	Demp	aIuR	水 hw-rj-idx (hl-j-ədx)
TERRE	Blu2	bu(R)taq	土 thagx
FEU	Demp	damaR (torche)	火 hmərx
SOLEIL	PPII	qi:nit (soleil, chaud)	日 n-j-it
BROUILLARD	Demp	e(m)bun	氛 b-j-ən
SEL	Demp	siraq	鹹 lagx (r-)
SABLE	Demp	pasiR	沙 s-r-ar (s-r-iar ?)

5. Nombres.

Les nombres chinois ont été empruntés par le thai, le japonais, le coréen etc. L'évidente similarité entre les nombres chinois et tibéto-birmans est attribuée à la parenté génétique par Benedict (1972), mais à des emprunts au chinois selon Miller (1988). L'AN offre des étymologies pour quelques nombres chinois, dont:

UN	Dyen	zaqit (unir)	一 ?-j-it
CINQ	Dyen	liga[?qh] (main)	五 əgax

Notes: Chinois *?j-it "un", aussi "unir" (Shu Jing). La comparaison pour "cinq" suppose que la consonne finale en PAN soit -q.

6. Verbes.

Les verbes passent pour être plus résistants à l'emprunt que les noms. Les comparaisons ci-après portent sur des notions universelles:

TETER/LAIT	PHINT	nunull	乳 n-j-ugx
SUCER	Demp	sepsep	咂 tsəp
RONGER	Blu1	gitnit	齧 niat
DORMIR	Demp	tiDuR	睡 d-j-uарx
PENSER	Demp	nemnem	懇 n-j-əm
VOMIR	Demp	u(n)taq	吐 thagx,h
PETER	Demp	ke(m)pis	屁 ph-j-idh

VENIR	Blu1	ari	來 ləg (r-)
7. Propriétés physiques.			
HAUT	R	-kaw	高 kagw
CHAUD	Demp	qaqet	熱 ɔ-rj-at (ɔ-j-iat)
SALE (salty)	Demp	asin	辛 s-j-in (acide)
COURBE (curved)	Demp	Deku	勾 kug
BLANC	Blu	burak	白 brak, 白 rak
8. Démonstratifs.			
CECI	PANT	iniH2	爾 n-j-idx
CELA	Blu3	ati	之 t-j-əg
CELA LA-BAS	Demp	i(m)pa[rR] (rive opposée)	彼 p-j-arx
9. Plantes alimentaires.			
RIZ	Demp	imay	米 midx
TUBERCULE	Demp	bu(w)aq (fruit/tubercule)	芋 w-j-agh (taro)
Note. TUBERCULE: bu(w)aq généralement "fruit", mais Paiwan "tubercule rond comestible". -h final dans le mot chinois est secondaire, les dialectes chinois du Seiyap ont -x, reflétant régulièrement PAN -q.			
10. Animaux.			
ANIMAL	Dyen	manuk	肉 n-j-əkw (viande)
CHIEN, CHIOT	Blu2	u(ɔ)kuq	狗 kugx
TIGRE	Demp	qarimaw	貓 m-r-agw
SERPENT	Demp	sulaR	蛇 d-j-ar (l-j-)
CRABE	Blu2	kalimapaw	螯 ɔ-r-agw
VER DE TERRE	Demp	qulej	蚓 riənx (l-j-)
MOUCHERON	Blu2	neknek	蠅 nək
HUITRE	Demp	tiRem	蠣 gəm
Notes. ANIMAL: ChA 肉 n-j-əkw désigne la viande animale par opp. à la chair humaine, 肌; Guo Pu (4e siècle ap. J.-C.) cite le sens de "cerf" dans le dialecte des environs de l'embouchure du Yangzi. Pour les animaux domestiques, Ch. 牛 ɔw-j-əg "buffle" peut être rapproché de PAN *sugu "cornes" (parallèles dans les lg. slaves, lith., cf. Buck 3.23); 犬 gəgx "porc" semble relié à PAN (Blust) beRek "porc domestique" malgré l'irrégularité de la consonne finale (PAN -Reg ou -ReR attendu).			
11. Culture matérielle.			
MAISON	Demp	Rumaq	廡 m-j-agx
ARC	Demp	panaq	弩 nagx
RIZ CUIT, GRUAU	Demp	buDbuD	飯 b-j-uanx
TISSU	Demp	kapas	布 pagh
12. Conclusion. Les comparaisons lexicales portant sur la faune, la végétation et la culture matérielle évoquent une société d'agriculteurs cultivant le RIZ, ramassant ou cultivant des TUBERCULES, possédant des CHIENS, et peut-être des BUFFLES et PORCINS domestiques, chasseurs à l'ARC, vivant dans des MAISONS, connaissant le tissage			

mais non la métallurgie. Ces caractéristiques sont celles de plusieurs sites néolithiques de la côte chinoise, du Shandong à la baie de Hangzhou, vers 5000 av. J.-C. (Chang 1986).

SOURCES: Demp: Uraustronesisch (Dempwolff 1938); Dyen: PAN (Dyen 1953, etc.); PANT, PHNT: Proto-Austronesian, proto-Hesperonian (Tsuchida 1976); Blu: Blust 1970; Blul: PAN (Blust 1980 etc.); Blu2: Proto-Malayo-Polynesian (Blust 1980 etc.); Blu3: Proto-Western-Malayo-Polynesian (Blust 1980 etc.); R: racine austronésienne (Blust 1988); PPH: Proto-Philippin (Zorc 1978).

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CONVERGENT SOUND CHANGE IN SORBIAN AND GERMAN

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1. INTRODUCTION

That language contact, especially of a long-standing variety, can influence the historical development of the contacting languages, has been established in the literature on the subject (for a recent, comprehensive summary, see Hock 1986: 380-531). From the very beginning of contact research, however, there has been considerable caution in the literature with regard to attributing linguistic change to cross-linguistic influence. Thus, Jakobson ([1938] 1949: 359) maintained that "*la langue n'accepte des éléments de structure étrangers que quand ils correspondent à ses tendances de développement.*" And, similarly, Weinreich (1964: 25) attributed any foreign influence to a "trigger effect, releasing or accelerating developments which mature independently." Given this "Internal Preparedness Hypothesis" (IPH), as the Jakobson/Weinreich hypothesis will henceforth be referred to in this paper, there are, for every suspected influence in the historical development of a language, only two possibilities: 1) the given change constitutes a genuine influence triggered by some latent internal development, or, 2) in the absence of such an internal development, the change must be viewed as an accidental similarity in development. The IPH does not allow for an item or rule transfer without an apparent internal motivation.

As will be shown in the case of two apparent sound change convergences, one from German to Sorbian, the other from Sorbian to German, it is not always easy to dismiss such convergences as accidental parallelisms, given the length of contact between these two languages. Yet, trying to save the IPH by simply postulating internal preparedness in the given cases would make the very notion of "internal preparedness" devoid of any meaning and usefulness. At least for one of the two convergences, viz., length neutralization in German, it seems that lengthy language contact can at times result in an item or rule transfer without "internal preparedness".

2. SORBIAN AND GERMAN

Sorbian (also known as "Wendish" or "Lusatian" and spoken today in two distinct literary variants, viz., Upper Sorbian and Lower Sorbian, a distinction not crucial to the problems discussed in this paper) is a Slavic-language enclave surrounded to the west, east, and south by East Central German dialects (Upper Saxon and, earlier this century, Silesian) and to the north by Lower German dialects (specifically the dialects of the Mark Brandenburg known

in German as "märkisch"). Actually, the German dialects in question are for the most part also co-territorial with Sorbian, so that Sorbian does not constitute a continuous language area over most of the officially bilingual region it occupies today. This appears to have been the situation at least since the latter part of the nineteenth century. Until about the twelfth century Sorbian had direct contact with Czech to the south, and until the early seventeenth century with Polish in the east. For the last 300 years or so, then, Sorbian has not had any joint border with Slavic-speaking regions, but only with German. Contact with the latter goes back to at least the sixth century A.D., i.e., the time of the widest territorial expansion of Sorbian from east to west.

A person hearing Sorbian spoken for the first time will immediately notice the strong phonetic Upper Saxon interference which seems to include the full register of the intonation contours of this German dialect. Conversely, there is something distinctly non-German about the German dialect that evolved in and around the Sorbian-speaking area. Most of the features involve phonetics and lexicology (for details, see Bronisch 1862; Michalk 1969; and Eichler 1974). One of the main difficulties is to establish the relative chronology of these phonetic and lexical features which for the most part have been recorded in dialect texts only since the mid-thirties of this century. By comparison, it almost seems easier to establish a relative chronology for two phonological influences that must have taken place well before the appearance of the first written Sorbian texts in the sixteenth century. The two developments in question involve a German vowel-lowering process that began to apply to Sorbian lexical items and a Sorbian length-neutralization process that was taken over by adjacent and co-territorial German dialects.

3. VOWEL LOWERING

In the Late Common Slavic process of vowel-restructuring, short *i* and *u* are said to have become schwa-type vowels, the so-called *fers* (so named after the corresponding letters *ь* and *ъ* in the Old Church Slavonic alphabet). As a general rule, the *fers* elided in a position before a syllable with a non-*jer* vowel or in word-final position (the so-called weak position), while they changed into a non-*jer* vowel in a position before a syllable with a *jer* (the so-called strong position). There are exceptions to this basic rule (see, in this regard, Malkova 1981: 98-111; and, specifically for West Slavic, including Sorbian, Timberlake 1988: 225-47), but the most systematic deviation can be found in the group *CiSC/CuSC (here C = consonant, S = *r* or *l*). In their treatment of short *i* and *u* in this environment, the Slavic languages are divided into two areas: in the northern group, the short vowels in CiSC/CuSC have full vocalic reflexes regardless of whether they were in a weak or strong position; conversely, in the southern group, these vowels show consistently null reflexes regardless of position (see, in this regard, Shevelov 1964: 467). For example, Common Slavic **zirno* "grain" is reflected in Russian as *zero* vs. Czech *zrní*; Common Slavic **gurd* "proud" as Russian *gord* (short form masculine singular) vs. Czech *hrdý*. Sorbian belongs to the northern group of Slavic languages with respect to the reflexes of CiSC/CuSC. However, while in other environments Common Slavic *i* and *u* coalesced into one *jer* in Sorbian, the group CiSC/CuSC appears to have maintained the two-vowel distinction in most dialects. Thus, the above Common Slavic root **zirno* "grain" is reflected in Lower Sorbian as *zerno* (Upper Sorbian has *zorno* with a later change *e* > *o*), while **gurd* "proud" is reflected in Upper Sorbian as *hordy* (Lower Sorbian, however, shows *gjardy* with a < *e* and secondary palatalization of the velar).

Without going into the details of the argumentation here (see Schaarschmidt forthcoming), a form like Upper Sorbian *hordy* "proud" cannot be accounted for in terms of the known inventory of phonological rules in the historical development of Sorbian. It is not possible, for example, to assume a development *gurd* > *gъrd* > *gord* (*hord*), because *b* > *o* applies only after labial and dental consonants. Such forms lend justification to the assumption, then, that at least dialectally short *i* and *u* in the group CiSC/CuSC did not change into *jers*, but were retained along with *ī* and *ū*. However, length in Slavic, including Sorbian, had been abolished as a distinctive feature by the 11th/12th centuries (i.e., the quality of some vowels automatically implied length). Thus, the Sorbian opposition *i* : *ī*, *u* : *ū* was marginal and earmarked for abolition. Short *i* and *u* could have been lengthened and thus merged with their long counterparts or they could have remained short and coalesced with other short vowels, such as *e* and *o*. The push for the latter development apparently came from the contacting German dialects where the lowering *i* > *e* and *u* > *o* occurred in an environment before *r* (see, in this respect, Žirmunskij 1962: 246-53; Eichler 1965: 91-92, 110-11; Eichler 1969: 51). The extension of the environmental condition to *l* in Sorbian is due to the fact that the group CVSC was treated identically in all other respects.

The assumption of a German phonological process applying to Sorbian lexical items would have to remain at a purely conjectural level, if it were not for the evidence from place-names. Germanized forms of Sorbian names in medieval records show that 1) at a time when the *jers* in Sorbian must already have coalesced, place-names are frequently spelled with CiSC for Common Slavic *CiSC and CuSC for Common Slavic *CuSC, indicating that Sorbian *i* and *u* had been retained in this environment; and 2) beginning with the 13th century, the records show increasingly CeSC for earlier CiSC and CoSC for CuSC, indicating that the lowering rule had applied.

4. LENGTH NEUTRALIZATION

This refers to a process in New Lusatian, the German dialect in the Sorbian-German bilingual area, whereby vowel length, which is distinctive elsewhere in German, is shortened, resulting in the coalescence of short and long vowels. That is, while Standard German, and most of its dialects, distinguish between *Aale* "eels" and *alle* "all", New Lusatian makes no distinction between these two words. As was noted above, Sorbian gave up length distinctions in favour of qualitative vowel distinctions before the 12th century. However, New Lusatian is likely not much older than the 17th/18th centuries when speakers of Sorbian underwent a language shift to the High German colloquial language (see, in this respect, Beseh 1983: 868). Thus, even though German dialects contacted with Sorbian for almost five centuries, it took a massive language shift for length distinctions to disappear in the German dialect in the Sorbian-German contact region. One must ask the question here, of course, whether German was internally prepared to relinquish length distinctions. The answer would probably have to be negative. One might stretch the point somewhat by saying that ultimately all languages have the option of giving up vowel length as a distinctive feature at some point in their historical development, but it is clear that this kind of extension to "universals" will make the notion of "internal preparedness" somewhat meaningless.

5. CONCLUSION

While the IPH hypothesis is very useful in distinguishing between accidental similarities in the historical development of contacting languages and

genuine influences, one cannot rule out the possibility of influences taking hold in one of the contacting languages without any obvious internal motivation. Thus, if at stage B, given a contact situation between languages L₁ and L₂, a change occurs in L₂ that did not exist there at stage A prior to contact, and that change existed in L₁ at both stages A and B, there are three possibilities of describing such a change: 1) the change is an accidental, parallel development; 2) the change was internally motivated and triggered by the contact situation; or 3) the change was transferred from L₁ to L₂ without any apparent internal motivation in L₂.

In the above data from the Sorbian-German contact situation, vowel lowering falls into Category 2), while length neutralization must be subsumed under Category 3).

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"DRIFT" IN EUROPEAN LANGUAGES

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This paper aims at pointing out several major "drifts" as seen in the history of European languages in the course of their development during the last two thousand years. "Drift", as defined by Sapir (Sapir 1949:147ff.), is a general tendency of language change, *Haupttendenz des Sprachwandels, tendance générale de développement linguistique* (cf. Knobloch 1986:796). Such drifts include development of articles, periphrastic tenses, grammaticalization of the verbs "be" and "have", simplification of morphology and diffusion of international cultural and technical words of Latin and Greek origin.

Languages develop in both directions: divergently and convergently. Divergent development of languages is represented by August Schleicher's *Stammbaumtheorie* (1861; Proto-Indo-European into branches of languages, thence into individual languages, again into dialects), while classical examples of convergent development are found in Johannes Schmidt's *Wellentheorie* (1872), Kristian Sandfeld's *Balkanfilologien* (1926) and N. S. Trubetzkoy's *Sprachbundtheorie* (1928; earlier 1923, whose idea goes back to Jan Bauwens de Courtenay, see Jarceva 1990:617). History of European languages, to use words of Ernst Lewy (Lewy 1964:102), is a history of Indo-Europeanization of Europe. It is a complicated process of Indo-European heritage and medieval and modern European innovations, of substratic, superstratic and adstratic influences. In general terms, western Europe is innovative, and eastern Europe is conservative. K. Matsumoto (1990:18) has coined the term *Atlantico Mediterranean Sprachbund* representing the core of Europe as a linguistic area. In this connection, H. Wagner's dictum (1959: 241) that *jede Sprache ist mit ihrer Nachbarsprache typologisch verwandt* becomes convincing (example: preaspiration in Icelandic

and some parts of northern Scandinavian languages, Wagner's *nord-europäische Lautgeographie*).

Drift 1. Development of articles. The article, as is known, is not found in old Indo-European languages like Sanskrit and Latin. In classical Greek, the definite article developed first, and under adstractive influence it spread to Vulgar Latin, and then to Romance languages. Neither in old Icelandic was there definite article (*Söf tēr sortna, sigr fóld í mar* "the sun blackens, and the earth sinks into the sea", Edda, *Vglosþá*, 56). Later, in the age of sagas, postponed article developed in Icelandic, but there is no indefinite article yet in modern Icelandic. Today, all other Germanic languages have definite and indefinite articles. In Slavic, with the exception of Bulgarian and dialectal Russian, no article has been developed. In Hungarian, the definite article (*a könyv* "the book") came into existence around 1350-1420 (Décsy 1973:214), which R. Lewy called 'Endogermanisierung des Ungarischen' (Lewy 1961:7). The population of 'article' languages in Europe is 350 million (population of Europe 630 million in 1973, Décsy 1973:214).

Drift 2. Development of periphrastic tenses. The Vulgar Latin type *habeo scriptam epistulam* "I have written a letter" spread to whole Romania, then to Germany, and from Swedish also to Finnish, where the perfect is formed with the verb "be" (*olen sanonut* "I have said") due to the lack of the verb "have". Also in Russian *ja napisal* "I have written" (or *ja napisal jsem'*, *jsem'* "I am" being omitted).

Drift 3. Grammaticalization of the verbs "be" and "have". This overlaps drift 2. Auxiliary verbs "be" and "have" have found a wide range of uses in passive voice, progressive forms and periphrastic tenses. Parallel developments are found in English *I am writing* (from 'I am a writing, I am in writing') and Basque *idazten dnt* "I have it in writing" to mean "I write", and East Armenian *sirom em* "ich bin im Lieben" to mean "I love", without necessarily being adstractive operation. The change of *habeo* construction from the Latin type *mibi est liber* to *I have a book, ich habe ein Buch, j'ai un livre*) is also a general European innovation. (Lat. *habeo*, Gr. *έχω*, English *have*, meant originally "catch, seize, give".)

Drift 4. Simplification of morphology. This is typically illustrated in modern English and Scandinavian languages (with the ex-

ception of Icelandic), in the loss or reduction of grammatical gender, case-inflection and personal endings. The reduction of the case-endings has to do with the word order SVO. The change from synthetic to analytic formation like Latin regeretur to English he might be being ruled is a drift in the history of European languages (N.E.Collinge's inaugural lecture as President of the Societas Linguistica Europaea, at Toledo, 1985). E.Lewy will call this phenomenon Flexionsisolierung (Lewy 1964:24, Lewy 1961:39).

Drift 5. Phonological developments. There have been a series of various phonetic processes, such as split and merger of phonemes, di- and monophthongization, palatalization and velarization, which are not limited to European languages. These occurrences have led to an average European inventory of 25 to 40 phonemes (medium rich system, Milewski 1973:158, 'normal' number, Haarmann 1976:53).

Drift 6. Diffusion of cultural and technical terms. European languages owe much to two great cultural languages of Europe, Latin and Greek. Scientific and ecclesiastical terms are common in European languages. Names of months and of the days of week are either Latin or calque of Latin (Portuguese segunda-feira "second day" for Monday, or Icelandic þriðjudagur "third day", like modern Greek Τρίτη, for Tuesday, and the like are exceptions). Linguistic and literary terms are largely Greek (phonology, morphology, syntax, diachrony, synchrony, poetics, iambic, epic, lyric, drama), while names of the parts of speech are Latin. Linguistic and cultural unity of Europe (europäische Sprach- und Kultureinheit) in the spirit of F.Miklosich, E.Lewy and Gy.Décsy are due to these two classical languages and Christianization.

Drift 7. Verbal periphrasis in West European languages. The Czech linguist Václav Polák points out the verbal periphrasis as western convergent development, illustrated in French faire l'achat for acheter, avoir recours à (recourir), faire halte (s'arrêter), prendre la fuite (fuir), Italian fare la strada (viaggiare, camminare), faire la route, faire attention, German acht geben, den Einfluss üben, exercer l'influence, etc. whose origin is located already in Latin iter facio.

West European languages (more or less connected with the Atlantisches Gebiet of E.Lewy) are prone to innovations, while East European languages are reluctant to them. In the words of Décsy, Europe's 'Vorhof' and 'Hinterhof' correspond to neuerungsfreudige

and widrige Gebiete. They can be termed innovative and conservative area.

Major languages (Whorf's Standard Average European) will steadily gain ground, while minor languages will lose ground but not disappear completely (Shimomiya 1990). English, with Germanic-Romance convergence, seems to be the most representative of the tendency toward integration and levelling (Pagliaro-Belardi 1963: 227). With the political unification of Europe going underway (its cultural and linguistic unity already to a considerable extent ahead), English seems to go toward a lingua franca of whole Europe.

Eurolects, or European superlects, will find more and more diffusion from Europe and from both Americas to the third world.

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SEMANTIC FOCUS IN OLD ENGLISH VERBS OF SAYING
AND THE CHOICE OF MOOD IN THE DEPENDENT STATEMENT

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1. INTRODUCTION

The question of whether the main verb could automatically determine the mood in the dependent statement in Old English has been one of the major concerns in English historical studies. J. H. Gorrell (1895:414-417), referring to the chief Old English verbs of saying, observes that there seems to be a definite semantic relationship between the introductory verb and the mood in its dependent statement. Bruce Mitchell(1985: 2020-2022), however, picking up the thread where Gorrell left off, suggests what seems to be an almost opposite idea. And more recently, Ogura (1991:393), dealing specifically with Old English verb *cweðan*, seems to stand inbetween Gorrell and Mitchell.

The present study, focusing on *cweðan* and *secgan*, chief Old English verbs of saying, tries to examine the nature of their projected clauses with special reference to the relationship between these introductory verbs and the mood in the dependent statement.

Halliday (1985:227) points out that there are three types of projection in presentday English--(1)paratactic, (2) hypotactic and (3) embedded. It is the first and the second types of projection that concern us here in the present study.

2. SYNTACTIC DISTRIBUTION

Tables (1) and (2) below show syntactic patterns of each one of these verbs.

Table 1 *Cweðan* and *secgan* in Early OE (Takeuchi:1987a)

	<i>cweðan</i>	<i>secgan</i>	
+direct speech	176	72.7%	0
+ðæt-clause	41	16.9%	15
+wh-clause	0	0	3
+accusative NP	13	5.0%	12
absolute	10	4.1%	3
+predicate	2	0.8%	0
<Total>	242		33

* Based on Pastoral Care
** The Old English
Apollonius of Tyre
(The Homilies of
Wulfstan)

**

Table 2 *Cweðan* and *secgan* in Late OE (Takeuchi:1987a)

	<i>cweðan</i>	<i>secgan</i>
+direct speech	51(96)	66.2(94.1)%
+ðæt-clause	8 (3)	10.4 (2.9)%
+wh-clause	0 (0)	0 (0)
+accusative NP	7 (2)	9.1 (2)%
absolute	1 (*)	1.3 (*)%
others	10 (1)	13.0 (1)%
<Total>	77(102)	61(19)

2.1. Cweðan

What best characterizes the verb *cweðan* is the fact that it primarily focuses on 'the wording'. This is reflected in the fact that *cweðan* predominantly occurs with direct speech (parataxis). When one tries to represent the original message, nothing is more accurate and vivid and less misleading than representing it in its direct original form. The fact that *cweðan* predominantly occurs with direct speech in early OE and exclusively so in late OE, strongly supports the view that it is an 'utterance-focus' verb. The fact that *cweðan* co-occurs with the *þat*-clause but not with the *wh*-clause further bears out this point.

It is also characteristic of the verb *cweðan* that it always requires the preposition *to* when it introduces the dative object as indicated in Table 1. This is semantically compatible because both *cweðan* and *to* presuppose a dynamic action of utterance. It is also compatible with the fact that *cweðan* mostly occurs in the preterit form, because the act of quoting is basically based on the speech events of the past, oral or written.

Even when *cweðan* occurs with indirect speech (hypotaxis), semantic focus still seems to fall on the wording, though projected in an indirect way. The message in the projected clause of *cweðan* seems to be fairly faithful to the original wording. The part "...eowre geferan þe mid þam cyninge ofslægene wærin" in (1) below, for instance, suggests that the scribe who wrote this entry was strongly affected by the semantic nature of the introductory verb *cweðon*, unconsciously shifting the projection from hypotaxis to parataxis within the same sentence.

- (1) hlo cuðdon þat tæt hie geforū geboden ware, þe ar mid þam cyninge wærin; þa cuðdon hie þat hlo hie þas ne onmunden þon ma þe eowre geferan þe mid þam cyninge ofslægene (The Anglo-Saxon Chronicle MS[A] 755)

The fact that the same part in MS [E] has a different reading as in (2) supports this view.

- (2) gēmunden þonne ma þe heora geferen þe mid þam ciunige wāron ofslagene

Similarly, extraction of the adverbial elements from the projected clauses as in (3)-(3') and (4)-(4') gives us the impression that *cweðan* here is being used parenthetically, which is basically paratactic in projection type.

- (3) Ðyder he cweð þat man ne mihte qeseglian on amin monde gyf man on riht wicode. (Orosius)
 (3') ... þat man ne mihte ðyder qeseglian ...
 (4) Of Sciringea heale he cweð ðæt he nēgiode on fīf dagan to þām portē þe mon hæt at Hēdum. (Orosius)
 (4') ... þat he nēglode on fīf dagan of Sciringea heale to þām portē ...

2.2. Seigan

On the other hand, as Table 2 shows, *seigan*, in sharp contrast to *cweðan*, primarily focuses on the message in the projected clause as a *gist*, hence suggesting the possibility that the projected clause may not necessarily be faithful to the original wording as in (5) and (6) below.

- (5) Ohthere sāðe his hlatorde Alfreðo kynige þet he ealra Norðmanna nordmest bude. (Orosius)
 (6) Se halga Iareow ... him eac gesægd hu him eac hwilum after dām mægenum eakiað da costunga. (Cura Pastoralis)

Secgan also occurs with what can be described as 'narratable entities' as in 7, 8 and 9 below, but it does not occur with direct speech as Table 2 shows.

- (7) Hi ða sende to Angle 7 heton heom sendan mare fultum 7
heom seggan Brutwalana nahtnesse 7 ðæs landes cysta.
(The Anglo-Saxon Chronicle MS [A] 449)
- (8) swa swa hie leasunga nytwyrðlice fleoð, ðæt hie eac ðæt
soð nytwyrðlice secgen (Cura Pastoralis)
- (9) ða bilwitan sint to herigeanne, forðæmpe hie simle
swincað on ðæm hie tiliað ðæt hie ne scielen leasunga
sæcgean. (Cura Pastoralis)

What makes secgan quite distinct from cweðan is the fact that secgan occurs with the wh-clause, basically a narratable category, while cweðan does not. Since semantic focus falls on the message-content as a gist in the wh-clause as in (6) above, the wh-clause is not semantically compatible with the verb which primarily focuses on the wording of the original message. In this sense, the fact that cweðan does not occur with the wh-clause is an easily predictable phenomenon. This crucial difference in syntax, therefore, enables us to characterize the underlying semantic difference between cweðan as a verb which focuses on the wording and secgan which focuses on the message-content.

3. SEMANTIC CHARACTERIZATION

Based on these syntactico-semantic features, we can now define each one of these verbs in terms of semantic components because, as Wierzbicka(1987:24) says, 'syntactic properties of speech act verbs provide astonishingly reliable clues to their semantic structure.'

Cweðan, in this respect, is the most primitive, hence the most basic among the three verbs. It can be defined as A SAYS B TO C. Since cweðan primarily focuses on the wording of the original speech, B is either what A actually uttered or fairly accurate rendition of A's speech act. The primary function of cweðan in this sense is to identify the subject (the original speaker) with the original speech form.

Likewise, secgan can be characterized as A IMPARTS B AS INFORMATION TO C. A is the subject of the sentence and at the same time the original source of information B, which is either a gist or an interpretation by the speaker. Value-judgement of B, therefore, depends on the speaker, not on the subject of the sentence.

4. NATURE OF HYPOTACTIC PROJECTION

4.1. Ðæt-complementation

What, then, is the nature of hypotactic projection in each of these verbs? How does it contrast to each other? Let us first observe the following sentences in (11).

- (11) a. Se biskop cwæð þæt him ræd þuhte þæt he to þæm gebuge
þe him bead Hinguar. (Ælfric, Lives of Saints)
- b. Se biskop cwæð: 'Me ræd þyncþ þæt þu to þæm gebuge
þe biett Hinguar.
- c.* Se biskop cwæð [the fact]/ [something to the effect]
þæt him ræd þuhte ...
- d. Se biskop sæde þæt him ræd þuhte ...
- e. Se biskop sæde [something to the effect] þæt him ræd
þuhte ...
- f. Se biskop sæde [the fact] þæt him ræd þuhte ...

Since the verb *cweðan*, as we saw, primarily focuses on the wording and has no semantic capacity to project the original message as a *gist*, it seems reasonable to assume that the projected message in (11-a) must be based on an actual utterance by the bishop which is probably something like (11-b). Since it is the wording which is brought into primary focus by *cweðan*, it seems impossible to paraphrase (11-a) as (11-c) by, for instance, inserting the test-phrases such as the fact or something to the effect.

On the other hand, the message described in the projected clause of *secgan* as in (11-d) is presented as a *gist*--hence not directly influenced by the form or style of the original message--paraphrasing it both as (11-e) and as (11-f) seems possible.

5. CONCLUSION

Cweðan does not affect the mood of the dependent statement in the sense that *secgan* does, because the former has no semantic properties to be projected into its dependent clause(statement) while *secgan*, as we have seen, has at least two semantic properties that must be projected into its dependent clause--whether the dependent statement is presented as a fact or as a *gist* entirely based on the value-judgement by the speaker. If *cweðan* is consistent in calling forth the subjunctive, therefore, it is only to indicate that the dependent statement is indirect whereas the choice of mood in the dependent statement of *secgan* is highly dependent on which of the two semantic properties is highlighted.

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LA LANGUES DES PUBLICATIONS SCIENTIFIQUES
AU 20e SIECLE :
ANALYSE ET SYNTHÈSE QUANTITATIVE

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1. INTRODUCTION

Cette recherche comporte une étude diachronique sur l'évolution de l'utilisation des langues dans les publications scientifiques internationales (1880-1980). Après avoir établit une méthode d'échantillonnage aléatoire simple, les index scientifiques internationaux ont été analysés pour les sciences exactes telles que les mathématiques, la biologie, la chimie, la géographie, la physique et les sciences de la santé. Les résultats de l'enquête sont indiqués sous forme de graphiques et de tableaux. Il ressort que la langue la plus fréquemment utilisée, dans toutes les disciplines retenues et durant toutes les périodes d'observation, est l'anglais. Le français et l'allemand, jugés comme langues importantes au début du 20e siècle, connaissent une régression constante. Par contre, le russe et le japonais montrent une croissance remarquable dans quelques disciplines, surtout après les années 1960.

2. METHODE D'ENQUETE

Les divers aspects des langues de diffusion internationale sont expliqués de façon générale, ainsi que l'histoire et la nature des publications scientifiques et techniques, et en particulier, celles des index scientifiques internationaux. Pour ce qui est de l'étude quantitative des données linguistiques, les différentes méthodes d'échantillonnage utilisées dans les recherches antérieures sont présentées par rapport à notre méthode identifiant les sujets à base des numéros aléatoires sortis de l'ordinateur. Les résultats obtenus par les autres recherches sont mentionnés à titre de comparaison avec les nôtres. Ainsi, le choix des données de base et des données de contrôle est expliqué en tenant compte du nombre d'entrées par année, de l'internationalité (le nombre de pays et de langues représentées) et de la durée de la publication, suivi de la

description bibliographique détaillée des index échantillonnes. Les résultats de l'échantillonnage pour indiquer l'évolution et la répartition des langues scientifiques sont présentés par période et par discipline.

3. CONCLUSION

Dans notre étude, 41 langues différentes ont été identifiées par rapport à environ cinq à six mille langues existentes sur la terre. Parmi ces 41 langues, 4 premières langues (l'anglais, le russe, l'allemand et le français) sont les véhicules d'environ 90 pour cent de la totalité des publications des articles scientifiques. L'évolution diachronique des langues des publications scientifiques nous révèle donc quelques indications déterminantes pour ce qui est du destin d'une langue de science au point de vue géolinguistique. On pourrait dire que cet état de monopole linguistique témoigne des puissances politico-économiques et socio-culturelles de l'ensemble des pays où se trouvent les utilisateurs de ces langues. Par conséquent, il semble impératif de connaître l'une, sinon quelques-unes de ces 4 langues pour la collecte des informations scientifiques internationales ainsi que pour se tenir au fait des progrès scientifiques les plus récents dans chacune des disciplines.

Ainsi, notre étude démontre que les langues internationales des sciences au début du siècle telle que l'allemand et le français connaissent un déclin graduel et constant tandis que l'anglais monopolise le marché des publications presque exclusivement à la fin du 20e siècle.

Par ailleurs, on constate qu'il y a deux phénomènes contradictoires qui caractérisent le 20e siècle. Alors que l'universalisation des moyens de communications internationales se propage de côté à côté de tous les continents avec une vitesse sans précédent, de plus en plus on fait face à des phénomènes des revendications culturelles et linguistiques des groupes et des nations minoritaires. Le même genre de phénomène est observable dans l'utilisation des langues pour les publications scientifiques. Au fur et à mesure qu'on manifeste le respect envers les langues minoritaires et que le nombre de langues employées pour la diffusion des publications scientifiques augmente d'une manière constante, un nombre très restreint de grandes langues gagnent de plus en plus de terrain dans ce secteur au détriment de ces langues minoritaires.

4. FIGURE ET TABLEAU

LES LANGUES DE LA SCIENCE



Les Langues de la science.

Articles publiés dans des revues scientifiques au cours des cent dernières années (de 1880 à 1980), classés selon la langue de publication: anglais (1), français (2), allemand (3), russe (4), autres langues (5), ces dernières représentant une proportion qui était de 11,9% en 1880 et de 7,3% un siècle plus tard. Ces autres langues pour lesquelles on a indiqué, entre parenthèses, le pourcentage correspondant à l'année la plus productive enregistrée dans le cadre de l'étude qui a été faite, sont notamment: l'italien (10,5), l'espagnol (4,4), le japonais (2,18), le polonais (1,17), le roumain (0,82), le portugais (0,75), le hongrois (0,62), le néerlandais (0,52), le chinois (0,5), le tchèque (0,47), le serbo-croate (0,43), le norvégien (0,32), l'ukrainien (0,27), le danois (0,23), l'azertädfjanais, le bulgare, le finnois et le turc (0,18 dans chaque cas), le slovaque (0,08), le coréen (0,07), l'hébreu et le slovène (0,05 dans chaque cas), l'arménien et le grec (0,03 pour chacune), l'espéranto, le géorgien, l'indonésien, le latin, le lituanien (0,02 pour chacune). Pour certaines langues très répandues telles que l'arabe, le bengali et l'hindi, qui comptent une centaine de millions de locuteurs chacune, aucun titre n'a été recensé pour les années étudiées. Pour la dernière année (1980), les principales "autres" langues étaient les suivantes: japonais (2,18), italien (0,98), polonais (0,85), espagnol (0,75) et chinois (0,5), les 2% restants étant répartis entre les 22 langues mentionnées ci-dessus. Les revues (sciences physiques, médecine, mathématiques, biologie, chimie et sciences de la terre) ont été recensées par décennie (en abscisse) à partir des données les plus complètes qui existaient. Les pourcentages pour chaque langue (en ordonnée) comportent une marge d'erreur maximale qui est indiquée ci-après: entre zéro et 1%: $\pm 0,06\%$; entre 1 et 10%: $\pm 2\%$; entre 10 et 20%: $\pm 2,5\%$ et entre 20 et 80%: $\pm 3\%$. (Texte reproduit de Mackey, 1984, p. 47)

REPARTITION DES LANGUES SCIENTIFIQUES MINORITAIRES

	1880	1890	1900	1910	1920	1930	1940	1950	1960	1970	1980
africaans	-	-	-	-	-	-	-	-	-	-	-
arabe	-	-	-	-	-	-	-	-	-	-	-
arménien	-	-	-	-	-	-	-	-	-	-	-
azerbaijani	-	-	-	-	-	-	-	-	-	-	-
bulgare	-	-	-	-	-	-	-	-	-	-	-
chinois	-	-	-	-	-	-	-	-	-	-	-
coréen	-	-	-	-	-	-	-	-	-	-	-
danois	•/1	•/1	-	•/1	•/2	•/2	•/2	•/3	•/4	•/1	•
espagnol	•/3	•/3	•/3	•/3	•/7	•/4	2	2	2	•/2	2
espéranto	-	-	-	-	-	-	-	-	-	-	-
estonien	-	-	-	-	-	-	-	-	-	-	-
finnois	-	•	-	•	-	•/1	•/1	•	•/5	•/2	•
flamand	-	-	-	-	-	-	•	•/5	•	•/1	•/1
géorgien	-	-	-	-	-	-	-	-	-	•/1	•/1
grec	•/1	-	•	-	-	-	•/1	•	•/1	•	•
hébreu	-	-	-	-	-	-	-	•/1	•/1	-	•
hongrois	-	•/1	-	•	•	-	•/5	•/5	2	1	1
indonésien	-	-	-	-	-	-	-	-	-	-	-
italien	1	1	•/3	1	2	4	5	4	5	3	2
japonais	-	-	-	•	-	1	1	1	5	3	3
latin	-	-	-	-	-	•/1	-	-	-	-	-
latvien	-	-	-	-	-	-	-	-	•/2	•/1	-
lithuanien	-	-	-	-	-	-	-	-	1	-	•
macédonien	-	-	-	-	-	-	-	-	•/2	•/1	•
mongol	-	-	-	-	-	-	-	-	•/1	-	-
néerlandais	•/1	•/1	-	•/1	•/5	1	1	•/4	•/6	•/4	•/1
norvégien	-	1	-	-	•	•/1	•/1	•/3	•/1	•/1	•
polonais	-	•/1	-	•/1	-	•	•/1	•/5	2	2	2
portugais	-	•	-	•/2	•/4	•/4	•/8	•/8	•/3	1	•/4
roumain	-	•	•/1	•/1	-	•/1	•	•/4	2	1	•/4
serbo-arabe	-	-	-	-	-	-	•/1	•/3	•/7	•/4	•/8
slovaque	-	-	-	-	-	•	-	-	•/7	•/3	•/2
slovène	-	-	-	-	-	•	-	-	•	-	•/1
suédois	•/1	•/1	-	-	•/1	•/1	•/2	•/3	1	•/1	•/1
tchèque	-	-	-	•	-	•/1	•/2	•/4	2	1	•/7
turque	-	-	-	-	-	-	•/1	•/1	•/1	-	-
ukrainien	-	-	-	-	-	•	1	-	1	1	•/4

Dans la figure 7, la courbe 5 (autres) comprend la somme des pourcentages des publications scientifiques (articles) dans toutes les langues autres que le français, l'anglais, le russe, et l'allemand. Ce tableau montre la répartition des pourcentages de la courbe 5 parmi les langues dans lesquelles on a trouvé des écrits signalés dans les index internationaux. Les pourcentages ont été arrondis ainsi: =0%; •=moins de 0,04%; •/1=entre 0,05% et 0,14%; •/2=entre 0,15% et 0,24% et ainsi de suite. 1=entre 0,5% et 1,4%; 2=entre 1,5% et 2,4%, et ainsi de suite.

(Texte reproduit de Mackey, 1983, p. 14)

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INFINITIVAL REANALYSIS IN EARLY MIDDLE ENGLISH

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1. INTRODUCTION

There has been a sharp increase within a Government-Binding framework in the number of functional categories and projections used since Chomsky (1986), Pollock (1989) and others. For instance, AGRs and AGRo have been added. These categories are exclusively used in structural Case assignment to the subject and object (Chomsky 1992). The T position has been added to ensure tense marking. This approach makes it seem as if the presence of tense and agreement features are automatic consequences of having a particular functional category. I show that this is not correct. First, there are languages without a T position and their tense features are situated in C or on V. This means features are separate from 'their' functional nodes. Second, agreement features can also be shown to be independent from an AGR position. I will not argue the latter point here but see van Gelderen (1992). For these reasons, I formulate two parameters, one of which is inherent to a Fukui (1986) approach, namely a parameter as to whether or not functional categories (C, AGRs, T, AGRo, etc.) are included in the grammar of a language. The second parameter is one that must be set for where (functional) features appear, in C, V, T or AGR.

In this paper, I focus on the tense features. In modern English *to* is the bearer of tense features and is placed in T. I am arguing the *to/for to* in Old and early Middle English also indicates the place tense features occur and this shows they are not placed in T but in C or V. The texts I examine are from the early part of the thirteenth century (*Katerine, Pe Wohunge of Ure Lauerd, Hali Meidenhad*) and from the middle and later half of the same century (Layamon's *Brut*, both the Caligula and Otho versions). I first show there is no T and TP in OE and eME and second that the tense features are on C or V. This then provides evidence for the above mentioned parameters.

2. T AND TP

The reason one assumes T and TP (or I and IP as in Chomsky

1986) in modern English is that there are lexical elements that fill these positions: *to*, *do* and modals occupy a position outside VP. This is shown for *to* and *do* in (1), (2) and (3). This is also the position in which auxiliaries appear with tense marking and therefore the position is seen as one in which tense features occur:

- (1) "I want somebody who will be on there not to legislate from the bench but **to** faithfully **interpret** the constitution". (George Bush as quoted by *The Economist*, 6 July 1991)
- (2) John tried **to run** and I tried **to**.
- (3) I **do** not want to go.

None of these constructions is possible in Old or early Middle English. The first split infinitive as in (1) occurs around 1300 and the construction becomes common only after 1380. The same is true with Pro-infinitives as in (2), the first of which occur around 1300. The first *dos* in a modern sense, as in (3), i.e. occurring in negative and question sentences, occur from around 1400 onwards. Modals and other auxiliaries can be seen as main verbs at least until late Middle English and this again points to the non-existence of a T/TP. In terms of Universal Grammar, this means that a parameter exists that must be set as to whether T/TP are included. The tense features (-tense in this case) must be placed elsewhere. I show this in the next section.

3. INFINITIVES IN EARLY MIDDLE ENGLISH

Instances of (*for*)*to* in *Katerine* and *Wohunge* are (4), (5) and (6). They can be seen as prefixes rather than as occurring in C or T since objects and adverbials precede them. It indicates the tense features are on the Verb. Both the Royal and the Bodley versions are given:

- (4) K, Royal 284 't i pis world iset us **for to frourin**,
'and placed in this world to comfort us',
- (5) K Bodley ant ipis weorlde iset us **forto frourin**.
- (6) Woh 45-6 leuere ham were eauer mare
in wa **for to welle**
'preferable to them is ever more in woe to well/boil'.

In *Hali Meidenhad*, the situation is unclear as to the position of the infinitival marker. It could be either in C or a prefix to the Verb in (7) to (8). This may be a transitional period. I give both the Bodley and the Titus versions:

- (7) Bodley 87, pet tu wendest **to bi>eotene**,
'which you hoped to get'.
- (8) Titus 90, pat tu wendes **to bi>eten**,

In the Caligula version of Layamon's *Brut*¹, *to* is not placed in C

since objects precede it as in (9); it is not placed in T for reasons given in section 1; it can, however, be seen as a prefix on the Verb:

- (9) Cal. 9351 and prattest hine **to slænne**
 7 his cun **to for-donne**,
 'and [you] threaten to slay him,
 and to destroy his kin'.

In Caligula, there are very few sentences such as (10), but they are prevalent in Otho. In addition, sentences such as (11) and (12) occur in Otho but not in Caligula. So even though it is possible in Caligula to have a *for* introducing an infinitival, there are never sentences where both *for* and *to* occur before an object as in Otho (11) and (12). The latter sentences indicate that both *for* and *to* are in C:

- (10) Cal. 6724
 Pe king me bi-tahte pis ard **for to** beon his stiward,
 'to be his steward'.
 (11) Otho 8490 **for to** hine finde,
 'for to find him'.
 (12) Otho 8570 **for to** worch makie,
 'for to do work'.

Additional evidence that *forto* is really a C in Otho but not in Caligula is that it introduces finite clauses frequently in Otho but not in Caligula as (13) and (14) show:

- (13) Otho 2834 **forte** he com to Rom.
 'until he came to Rome'.
 (14) Cal. **pat** heo come to Rome buri.

When *for* is not present in Otho, *to* is still on V because sentences such as (10) above continue to occur although less frequently. One of the other differences between Caligula and Otho is that infinitivals can be introduced by just *for* as in (15) which is (16) in Caligula:

- (15) Otho 713 **for hunt**i deor wilde,
 'to hunt wild animals'.
 (16) Cal 713 7 **draf** per pa wilde deor,
 'and hunted there the wild animals'.

If one sees *to* as occupying the place where tense features are placed, *to* in early Middle English shows that such features are on C or V.

4. CONCLUSION

To conclude, between *Katerine*, the *Wohunge*, *Hali Meidenhad*, the Caligula version on the one hand and the Otho one on the other, the position in which *to* is generated changes. In *Katerine*, the *Wohunge* and Caligula and possibly in *Hali Meidenhad*, *to* is still part of the VP (as a prefix) and (-)tense features are placed in VP whereas in Otho, *to* may move to C to get tense (and is no longer only a prefix). In *Hali Meidenhad*, the situation is ambiguous between the tense features (and *to*) being in either C or as a prefix. This may be a transitory period in which the ambiguity makes it possible for a reanalysis to take place.

So, even though tense features are generated in T in Modern English, there seems to be evidence that this is not the case in early Middle English. This fits with the 'parameter-approach' of the Government-Binding framework: Universal Grammar determines that tense features must be placed in an appropriate (functional) category, but that languages may differ as to which position they select. Early Middle English (this is true for all texts) is a language in which tense features occur in C or on V and the finite verb moves to C resulting in a Verb-second pattern. In later Middle English, the language learner sees modals, *to* and *do* as separate elements and the TP parameter is set for +TP. Tense features are seen as placed in T. Once the tense features are situated in T, Verb movement of the main verb to C is no longer needed for the verb to get tense and that is why V-to-C movement is disappearing in this period and the main clause can be seen as TP (or AGRsP if one assumes such a node). V-to-C movement is still necessary when an element occupies Spec CP.

What set the change described here in motion is not clear. A gradual grammaticalization of *to* may have necessitated the reanalysis of *to* as part of the Verb to an auxiliary.

NOTES

1. I used the Oxford Text Archive edition of Layamon together with the TACT program. Thanks to dr. Louk Bouwen for explaining this program to me.

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SECTION 9

L'AMÉNAGEMENT LINGUISTIQUE

LANGUAGE PLANNING

LANGUAGE LEARNING AND EUROPEAN INTEGRATION

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1. THE STUDY OF EUROPE IN UK HIGHER EDUCATION

Language learning in Higher Education is usually thought of as a free market activity: students select programmes according to their own interests, knowledge and career ambitions, and Universities respond. The aim of this paper is to examine how well UK Higher Education is responding to understanding 'integrated' Europe, and how education for intercultural communication can best be carried out at this level.

1.1 Programmes

European matters are taught in 112 undergraduate and 38 Masters programmes in 66 of the 80 UK Universities. 58 undergraduate programmes, and 30 taught Masters, include 'Europe' in the name of the degree. There are 16 specific Doctoral research programmes.

The most widely taught subjects are French and German Studies, Politics and Economics, History and Law, while 'Society' follows some way behind. Many courses form part of other programmes, closely related to Politics, International Relations, Strategic Studies, and students choose the importance they attach to Europe. Provision is expanding massively (Bettinson 1989) although the list excludes combinations of science or engineering with European studies or languages. Many institutions now offer languages and area studies across all programmes so the European dimension will enter many more courses.

Professional study of European Law is now essential in all Law programmes; the same is true of business education, with massive growth in European MBAs. The number of Doctoral programmes specifically identified in the UK is small, as is the number of language-based post-graduate taught programmes. The cross-Europe recognition of qualifications and periods of study represents a major problem: neither the content nor the manner of achieving the qualification has any similarity between any two EC countries.

1.2 Research

Research areas that least attract the British researcher are budgetary questions, culture, the enlargement of the Community, and fundamental and human rights. The external relations of the Community, attitudes towards Europe, and the structure and operation of the institutions are most popular, with enterprise, economic and monetary union and the internal market close behind.

Collaborative research and teaching (in the UK and outside) is now well-established, as is the belief that aims, objectives, methods and outcomes, should reach international levels. The main problem that now faces European Studies is to define what European Studies are in an age of rapid change.

2. A NEW EUROPE

The creation of an apparent European super-State in the European Community raises questions about the nature of ethnicity and group identity; and the process of cultural comparison. Europe itself, created by migrations and conflicts, is not easily circumscribed by language, religious or ethnic criteria.

2.1 The language criterion

Most European languages fall into one of the seventeen main language phyla (Ruhlen, 1987). But individual languages are fairly remote from each other in terms of today's communication needs. 'Nearby' languages such as Georgian, Turkish and Arabic are classified in different phyla. So there is little basis, even if one completely ignores recent reverse immigration from South to North and from Asia to Europe, for any language-determined special character for Europe.

European language speakers are widely distributed. More than 1.6 billion people in the world can speak English (Crystal 1987: 359), with 316 million first language speakers. Spanish mother-tongue speakers number 250 million, German 100 million and French 70 million, so speakers of European languages outnumber the 400 million or so population of territorial Europe.

Europe is full of language minorities, each in the middle of dynamic language shift, whether through normal language change, interference, or contact with new immigrant languages. Majority languages are also facing change through being used as languages of international communication, with native English speakers getting used to constructions like 'The obtained results show it is useful to distinguish' or 'they export in countries' (Kassis 1991).

Communication, in and across the new Europe, will however have to be managed, and a language policy will be essential for the European Community. The most obvious solution is to adopt an international 'culture-free' variety of English, against predictable objections, mainly from France (Fosty 1985). The inevitability of English derives from numbers, the weight of mass-media communications and the youth culture, the USA as the major world power. Nonetheless the use of English does not make French a threatened language.

2.2 The religious criterion

Can religion unify Europe? Christianity is the religion of Europe, but Catholics and Protestants have long divided Europe on a North-South basis, and the viciousness of religious division is still with us, whether in Northern Ireland, the Orthodox Church, or the divisions between various Churches. Islam has always been present, mainly in Asia Minor. Recent immigration has brought Islam to the status of the second religion in France, and developments in North Africa may increase this. But Europe is unlikely to find unity in Islam.

2.3 Cross- and intercultural approaches: regimes and responses

If ethnic groups within Europe are to cohere, to transfer or add to their sense of nationality in order to form a single European nation or supra-national organisation, this must come about through a resolution of the tensions between the supra-national, the national and the regional. This could lead to a *Europe of levels*, with a separation of political powers between regional, national and supra-national governments, and the language/ethnicity issue treated as a regional issue; a *Europe of territories*, where the existing countries continue present powers, and thus maintaining linguistic/ethnic tensions; or a *Europe of functions*, where different national and regional groups enjoy different powers for different purposes, reducing the strength of the ethnicity/language issue and devolving identity down to the lowest relevant level.

The major problem for European citizens of the future will be how to create the necessary intercultural approach, and particularly how to accept and empathise with the culture of the other while maintaining one's own. Clanet (1990: 220), poses three conditions for solution: reciprocal recognition of cultures, a firm and securely rooted personal identity, intercultural negotiation without dominance.

Frischer (1990), reporting on views of the French held by a sample of opinion-formers abroad, notes that, while the 'Anglo-Saxons' are usually kind and understanding, the Germans are tougher and less forgiving, and the Italians resent French 'superiority'. My own survey of what 100 students analysed in French contemporary life (Ager 1991) reinforced the 'kindly' British view, supportive of French views and attitudes, admiring Mitterrand from the point of view of French internal politics. The students have tended to lose their own personality in the process, while Frischer's established opinion-formers find it difficult to shake off their inbuilt model of comparison.

For interculturality to work, the majority culture itself has to change. Clanet points out the necessity for the majority culture to avoid dominance as an approach in intercultural negotiation, whether on the group level or on that of the individual. He does so in a context in which, typically, majority cultures have weighed heavily on those of minority groups, whether they be Bretons or Gypsies, Arabs from North Africa or black Africans.

4. LANGUAGE, CULTURE AND FOREIGN LANGUAGE LEARNING

Foreign language learning at an advanced level is necessarily also culture learning (Stubbs 1986: 64-82), unless the purpose is to acquire a neutral lingua franca, where the users must define meanings. Attempts to replace the foreign language's cultural frame by domestic socio-political and cultural norms lead to such strange English as 'I wish the friendship between our two peoples evergreen!' in a Chinese textbook.

4.1 Language-based study for Europe

What sort of language and culture learning might be appropriate for those in Higher Education who are going to be the principal interpreters of another culture? Objectives should include education of the powers of the mind; acquisition of knowledge, concepts and techniques, and learning relevant skills.

Campos et al (1988), report how these matters are currently tackled in relation to French studies across Europe. The report proposes three levels of learning a foreign language and culture: level 1, whose objective is 'stereotyped amazement' through comparison with the learner's own culture, where information is atomistic, the learning language-based and aspects of the foreign culture are dealt with as they arise in the learning of grammar. The objective of level 2 is to gain access to the culture through the language, moving the learner away from his own ethnocentrism, teaching a practical sense of new socio-cultural behaviour norms, and thus achieving recognition and respect. Learning is still language-based, discovering foreign realia through survey and descriptive courses and 'background studies'. Level 3 objectives are to relate language and cultural learning, and do so in an intellectually satisfying way. Requirements include a period in the foreign culture, the use of native speakers, autonomous learning, thematic study, an interdisciplinary and coherent approach. The report raises two problems in 'learning cultures' at level 3: the need to ensure a scientific rather than atomistic approach, and the need to ensure students understand the universals of disciplines such as politics and sociology as well as their application to individual societies.

5. CONCLUSIONS

The greatest tension in planning provision for language and culture learning is that between the global and the local (Atamer and Johnson in Calori and Lawrence 1991: 218-229). For European Studies there is a three-part tension: local diversity of cultures, regions and languages conflicts with European homogeneity, within the world-wide context. In business studies for example an increasingly similar lifestyle leads to segmenting customer behaviour and characteristics in

similar ways, and the social, economic and behavioural characteristics of European purchasers, run in parallel, while international business requires a global style.

Thus the diversity of languages, cultures and customs represents both the strength and the weakness of Europe. The solution in business studies is to recognise and use diversity in order to improve: to accept different organisational designs, rely on strategic thinking rather than reliance on procedural systems; take account of counter-indications. But the message for business, language learning or European Studies is the same: the basic dilemma of interculturality is to accept other peoples' cultures while maintaining and recognising one's own.

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LE CHANGEMENT TERMINOLOGIQUE EN MILIEU DE TRAVAIL: UNE PREMIERE ÉVALUATION DU FACTEUR OCCUPATIONNEL

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1. INTRODUCTION

C'est dans le contexte de la politique d'aménagement linguistique du Québec (La Charte de la langue française, 1977) que nous avons entrepris une étude longitudinale sur les facteurs extra-linguistiques qui pèsent sur: 1) le choix du français ou de l'anglais pour la terminologie en milieu de travail, et 2) le changement du comportement terminologique et sociolinguistique. En 1983, nous avons recueilli des données linguistiques et sociolinguistiques auprès de 453 employés (60% de la population) d'une grande entreprise montréalaise du domaine du transport; en 1990, nous avons effectué à nouveau, dans la même entreprise, une deuxième cueillette de données comparables auprès de 192 employés (40% de la population totale à cette époque), dont 99 étaient à l'emploi de la compagnie en 1983. Nos données proviennent d'un questionnaire d'opinions écrit, auto-administré, d'une durée d'environ 20 minutes qui nous fournit des renseignements: 1) sociodémographiques (langue première, âge, sexe, scolarité, poste, etc.); 2) sur la perception qu'ont les répondants de la situation communicationnelle dans l'entreprise, tant à l'oral qu'à l'écrit (langue des termes techniques dans les communications hiérarchiques, etc.); 3) sur diverses catégories d'opinions et d'attitudes (par rapport à la situation du français dans l'entreprise, au processus de francisation, aux avantages et désavantages - personnels et institutionnels - de la francisation, etc.) et, 4) sur le choix du français ou de l'anglais pour dix termes techniques, à l'oral et à l'écrit, ce choix étant considéré comme un indice du comportement terminologique en situation réelle.

Nous amorçons ici une comparaison entre certains résultats de 1983, dégagés suite aux analyses statistiques (corrélations, régressions, etc.), et ceux qui se dégagent de l'étude préliminaire des données de 1990 provenant des 99 travailleurs à l'emploi de la compagnie en 1983 (le Groupe A), et qui étaient donc présents lors de la campagne de francisation terminologique mise sur pied par l'entreprise à cette époque. Les caractéristiques linguistiques des travailleurs sont semblables dans les deux corpus: environ 95 % des travailleurs ayant déclaré le français comme langue première. De même, la langue habituelle du travail est le français, ce qui permet une évaluation de la pénétration de l'anglais dans un milieu de travail essentiellement francophone. Certains changements organisationnels importants ont cependant eu lieu. Tout d'abord, la campagne de francisation terminologique ne s'est pas poursuivie au-delà de la deuxième année; ensuite, l'entreprise a subi une transformation organisationnelle importante dans le cadre d'une fusion avec d'autres entreprises.

Une première analyse comparative, basée sur les résultats globaux (toutes catégories confondues), révèle une augmentation du choix de l'anglais pour les dix termes, bien que la majorité des attitudes soient plus favorables au français en 1990 qu'en 1983. Avant de conclure à l'échec des efforts de francisation, nous confronterons le choix des langues à l'oral pour les termes techniques à certaines opinions, perceptions et attitudes en fonction du poste occupé par les travailleurs, ce facteur s'étant révélé avoir une grande valeur prédictive et explicative du comportement terminologique en 1983.

2. LE CHOIX DES LANGUES POUR LES DIX TERMES DANS LES COMMUNICATIONS ORALES

Le tableau suivant présente les données comparatives du choix de l'anglais ou du français, à l'oral, pour les dix termes techniques testés, ceux-ci représentant, à la fois des termes dont l'utilisation est généralisée, et des termes qui posent problème pour la francisation.

Liste des termes Année	Français 83/90(A) %	Les deux 83/90(A) %	Anglais 83/90(A) %	TOTAL N (Réponses)
C.O.D./C.R.	4,8/ 0,0	10,8/13,9	84,4/86,1	372/ 72
Pro-Bill/facture provisoire de transport	6,6/ 2,7	12,6/16,0	80,8/81,3	381/ 75
O.S. & D./S.M.A.	8,1/ 7,8	18 7/26,6	73,2/65,6	284/ 64
Lift Truck/chariot élévateur	11,9/ 7,0	20,4/16,3	67,7/76,7	353/ 86
Dispatch/répartition	13,3/12,1	26,3/25,3	60,5/62,6	400/ 91
Cash collect/port dû	15,8/11,8	27,0/27,9	57,2/60,3	355/ 68
Bill of lading/connaissance	17,7/18,2	35,6/37,7	46,7/44,2	390/ 77
Trailer/remorque	20,4/21,1	34,0/34,4	45,6/44,4	406/ 90
Fuel/carburant	28,5/10,1	31,0/13,5	40,5/76,4	407/ 89
Truck Load/chargement complet (charge entière)	33,4/18,8	29,0/27,5	37,6/53,8	359/ 80
MOYENNE	16,3/11,0	24,8/23,9	58,8/64,9	3707/792

TABLEAU 1. La comparaison du choix de la langue pour les dix termes testés, dans les communications orales, dans l'entreprise de transport. Comparaison entre tous les répondants de 1983 (N=453) et ceux de 1990 qui travaillaient déjà pour la compagnie en 1983 (le groupe A) (N=99).
(C.R. = comptant sur réception; O.S.& D.= over, short and damaged; S.M.A. = surplus, manquant et avarie)

À première vue, indépendamment de l'année de cueillette, on remarque une baisse déclarée de l'utilisation du français en faveur d'une plus grande utilisation de l'anglais ou de l'alternance entre le français et l'anglais. On note aussi une grande variation au niveau des termes eux-mêmes, qui rend compte en partie, de la diminution de l'utilisation du français pour ces termes. Il est clair qu'une bonne partie des termes de langue française que l'entreprise a voulu promouvoir en 1983 n'a pas été acceptée par les employés. Malgré tout, sauf pour deux exceptions, le choix du français comme seul choix a diminué pour tous les termes testés. Des analyses plus détaillées révèlent cependant que, toutes proportions gardées, l'usage terminologique déclaré suit une courbe relativement similaire pour les deux groupes, à cette différence près que le choix du français est relativement moins important en 1990 (Groupe A).

Quelles que soient les hypothèses qu'on pourrait envisager, concernant les caractéristiques linguistiques de certains termes, les changements organisationnels dans l'entreprise, ou encore les changements sociopolitiques survenus entre 1983 et 1990, il nous reste à essayer de comprendre le climat terminologique général et la relation entre les divers facteurs extra-linguistiques testés. Par ailleurs, une question importante se pose. Les comportements linguistiques que nous venons de décrire pour l'ensemble des travailleurs sont-ils les mêmes pour tous les groupes de travailleurs?

3. LE CHOIX DES LANGUES EN FONCTION DU POSTE

La figure suivante présente les données sur le choix de langue pour les dix termes techniques à l'oral, en fonction du poste. Pour faciliter la comparaison, ces données sont présentées sous forme de scores - ou d'indices - d'utilisation du français obtenus par l'agglomération des données sur les termes et une pondération en faveur du français répartie sur une échelle de 0 à 100.

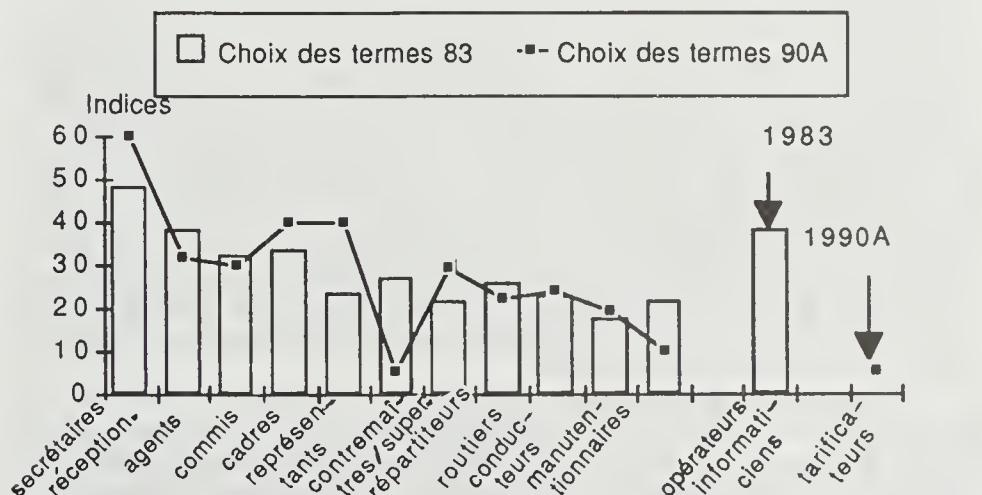


Figure 1. La comparaison, en fonction du poste, du choix du français pour les dix termes techniques en 1983 et en 1990 (Groupe A).

La comparaison fait ressortir que, non seulement le comportement varie en fonction du poste, mais que certains postes semblent responsables de l'usage moins généralisé du français en 1990. Ainsi, les contremaîtres et superviseurs accusent une baisse importante dans l'utilisation déclarée du français avec un indice de 5 en 1990 contre 27,1 en 1983. Il en est de même pour les mécaniciens dont l'indice de francisation est passé de 22 en 1983 à 10,2 en 1990. Aussi, il est clair que les tarificateurs sont responsables en partie de la baisse de la moyenne générale en 1990, avec un indice de francisation de 5,3. Par contre, les répondants de certaines catégories de postes déclarent faire un usage plus important du français pour les dix termes en 1990 qu'en 1983. C'est le cas des secrétaires et réceptionnistes avec un indice de francisation de 60 en 1990 comparativement à 48,2 en 1983. C'est aussi le cas des cadres (33,6 en 1983 et 40 en 1990), des représentants (23,2 en 1983 et 40 en 1990), et des répartiteurs (21,7 en 1983 et 29,3 en 1990). Ces données nous obligent à nuancer notre analyse, et nous empêchent de conclure que nous sommes en face d'un phénomène d'anglicisation généralisée pour toutes les catégories de travailleurs.

Nos analyses statistiques ont d'ailleurs révélé que le fait d'occuper un poste de cadre ou de col blanc correspondait à une plus grande utilisation de termes techniques de langue française. Or, il ressort des données de 1990 que ce

sont toujours les titulaires de ces mêmes catégories de postes qui déclarent faire un plus grand usage du français pour les dix termes techniques, à l'oral. En effet, les indices d'utilisation du français sont plus élevés pour les cadres et cols blancs (sur la gauche de la figure, sauf pour les tarificateurs présentés à l'extrême droite); c'est le contraire pour les cols bleus regroupés vers la droite.

4. QUELQUES PERCEPTIONS, OPINIONS ET ATTITUDES

L'examen d'un autre ensemble de variables qui comprend des perceptions, opinions, et attitudes envers le français et le processus de francisation a aussi révélé, pour 1983, que ces variables étaient en étroite corrélation avec le choix concret de langue pour les dix termes. Ainsi, les titulaires de postes de direction et de cols blancs se sentaient plus personnellement impliqués dans le processus de francisation de leur entreprise que les cols bleus. De plus, ils percevaient davantage qu'ils étaient en train de modifier leur comportement terminologique vers une plus grande utilisation de terminologie de langue française. Or, ces mêmes personnes avaient aussi un indice de francisation plus élevé par rapport au choix du français pour les dix termes testés. En comparant les travailleurs de 1983 avec ceux du Groupe A de 1990 dans les mêmes contextes, on se rend compte que les tendances présentées pour 1983 sont, grossièrement, parallèles à celles qu'on trouve dans le corpus de 1990, à quelques différences près. De telles attitudes positives ne peuvent pas, nous semble-t-il, aller de pair avec un net recul du processus de francisation. C'est pourquoi nous croyons que ces données présentent le portrait d'une situation relativement favorable au français dans l'ensemble, d'autant plus que certains des termes testés sont problématiques, que la campagne de francisation n'est plus en cours depuis plusieurs années déjà, et que, rappelons-le, ces travailleurs ont connu de nombreux changements organisationnels qui ont certainement modifié la dynamique linguistique de l'entreprise.

Comment expliquer alors, la diminution générale de l'utilisation du français pour les dix termes testés? Il semble que les attentes et les besoins en matière de francisation diffèrent en fonction des diverses catégories de travailleurs. L'examen d'autres variables semble corroborer cette hypothèse. Par exemple, il ressort clairement que, dans l'ensemble, la majorité des travailleurs dans toutes les catégories de postes considère que le fait d'utiliser une terminologie de langue française au travail est important. Toutes les catégories, sauf celle des cadres, des contremaîtres / superviseurs et des tarificateurs ont un indice de près de 70 ou plus sur ce point. De même, la majorité des travailleurs dans presque toutes les catégories de postes semble satisfaite de l'utilisation des termes techniques de langue française dans leur milieu de travail. Cependant, on retrouve dans les travailleurs moins ou peu satisfaits, ou pour qui l'utilisation de termes techniques de langue française ne semble pas ou peu importante, à peu près les mêmes catégories qui se démarquent habituellement: les commis, les contremaîtres / superviseurs et les tarificateurs dans certains cas. Ce sont les mêmes, rappelons-le, qui ont un indice de francisation assez ou très bas en ce qui concerne le choix du français pour les termes. Mais, on retrouve aussi dans cette catégorie, les secrétaires qui, même si elles ont l'indice de francisation pour le choix des termes le plus élevé (60), semblent moins satisfaites de la situation terminologique, toutes proportions gardées, que les autres travailleurs. Il est raisonnable de penser qu'elles semblent avoir des attentes plus élevées que la majorité de leurs collègues cols blancs, et même, toute proportion gardée, de la majorité de toutes les catégories de postes. Les tarificateurs, eux, semblent vivre la situation inverse: ils déclarent un niveau d'attente très bas et un niveau de satisfaction extrêmement élevé: 100!

UNE ENQUÊTE SOCIO TERMINOLOGIQUE : ETUDE
D'IMPACT DES ARRETES MINISTERIELS

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Notre groupe a été chargé par la Délégation générale à la langue française d'étudier les rapports entre le vocabulaire du génie génétique paru au Journal Officiel et celui des usages réels. Cette initiative de la DGLF indique une tendance nouvelle chez les responsables du français dans l'hexagone : le désir d'évaluer la portée de la politique linguistique officielle. Que la France commence à se poser ce problème : "suffit-il d'édicter pour faire dire?", c'est un fait à marquer d'une pierre blanche.

Dans l'optique de notre groupe, la terminologie n'a pas pour tâche la normalisation, mais la régulation des interactions verbales. La normalisation technologique a légitimement induit l'espoir d'un pendant terminologique, mais cette politique échoue devant les faits : la dynamique des systèmes linguistiques et leur interpénétration par le jeu social et l'histoire obligent à un long détour avant toute standardisation.

La prise de conscience du besoin d'évaluer implique de remettre au cœur de l'activité terminologique l'observation des pratiques langagières. Cette prise en compte des conditions de production du discours implique le recours aux procédures d'enquête de la sociolinguistique et la récupération de la dimension orale. Elle suppose une démarche *glottopolitique* qui, loin de se réduire à la seule politique linguistique, cherche à appréhender l'ensemble des facteurs qui contribuent au réglage des discours. C'est ainsi que l'on peut poser un diagnostic. Ce n'est qu'après cette étape de description que peut être tentée une politique de la langue.

La recherche menée sur le génie génétique devait prendre en compte l'écrit et l'oral. Notre position est que cette démarche double constitue un préalable,

non un détour : si l'écrit est le mode de rendement du laboratoire, l'oral est quant à lui le milieu de naissance des savoirs. Un laboratoire est évalué au nombre de publications, mais c'est oralement que l'on déjoue les obstacles, que l'on commente les résultats des manipulations, qu'on les confronte et les enseigne. Les concepts naissent oraux.

C'est là une des raisons du dysfonctionnement linguistique quand les chercheurs d'une discipline lisent, écrivent en anglais, mais travaillent et enseignent en français : la conceptualisation et le transfert conceptuel s'opèrent plus difficilement dès lors que le réglage du rapport entre concept et signifiant est géné par la concurrence de deux systèmes de signes, l'un plus ou moins bien possédé au niveau de l'écrit, et, bien souvent, de manière relativement passive (ce qui fait le départ avec la situation québécoise), l'autre inséré au système général d'une langue quotidienne, et d'une culture, mais considéré souvent, comme dans tout cas de diglossie, comme moins fiable et moins économique.

Faute de place, nous renonçons à présenter ici l'enquête sur l'écrit. Son originalité est de s'étendre au-delà de ces sources classiques que constituent le discours scientifique "pur", les discours pédagogique et de vulgarisation. En effet, nous avons également pris en compte les discours d'interface, et les sources anonymes. Ces deux types de discours, nécessaires au fonctionnement du continuum science/technique/production, jouent un rôle peut-être essentiel, encore qu'inaperçu, dans la régulation terminologique. Leur intérêt glottopolitique est donc éminent ; par le compromis langagier, l'ouverture pluridisciplinaire, et la nécessité d'une négociation terminologique pour le partage des savoirs et savoir-faire, ces deux types de textes sont des instances de standardisation peu prestigieuses mais efficaces.

Evoquons l'enquête orale. Nous ne pouvions observer le chercheur dans sa pratique quotidienne, dans ses lectures, à sa paillasse, assister à ses séminaires, ses cours, aux discussions de protocoles, de résultats, etc. Nous avons dû nous contenter, en un premier temps, d'enquêter sur ses attitudes, ses prises de position métalinguistiques et épilinguistiques : métalinguistiques, quand il rend compte du sens qu'a un terme à ses yeux, ou qu'il l'insère dans une logique dénominative ; épilinguistique, pour ce qu'il pense des mots, de leur adéquation au réel, de leur bonne formation, et de la concurrence entre les langues.

On constate une forte insécurité linguistique. Si l'on garde en toile de fond la nécessité d'un rapport facile entre potentialités de la langue et conceptualisation, on s'inquiètera des dangers de la situation. Nous aurions tendance à dire que plus de maîtrise d'un français du génie génétique, bien équipé, aiderait à la recherche et à l'enseignement, ainsi qu'à l'information des citoyens des pays francophones sur les immenses problèmes que posent les progrès mêmes de cette discipline.

Illustrons rapidement quelques formes de cette insécurité. La prégnance de l'anglais écrit est telle que les chercheurs de Doctorat, à qui l'on demande un effort de francisation lors de la rédaction de leur thèse, sont amenés à se réunir pour bricoler entre eux un "français du génie génétique". Nous avons interviewé un de ces terminologues involontaires.

"Un marquage ADN par nick translation, bon, ben on a commencé à se casser la tête pendant une demi-journée, savoir comment il fallait le traduire, bon alors... faire une amorce en déplacement du trou, bon enfin, le truc pas possible ! N'importe quoi !"

"Un jour on s'est dit : est-ce que ça existe ce truc ? Parce qu'on nous faisait : non, ça ne se met pas !. Alors on a pris le dictionnaire, on a cherché *ligation*, on n'a jamais trouvé *ligation* dans le dictionnaire, on s'est dit ça n'existe pas.".

Autre trait diglossique, l'alternance de codes, assez comparable à ce qui se produit en tout contact d'une langue dominante et d'une langue dominée. Non seulement la situation diglossique entraîne un sabir de laboratoire mais encore l'alternance de codes apparaît à l'intérieur même du discours d'un locuteur unique, dédoublé en informateur parlant français et en pratiquant anglophone.

"Donc c'est ce qu'on appelle le *heatshot*, le stress au chaud (...) Donc elle s'hybride à n'importe quoi. Elle ne fait pas de *mismatch*, elle ne fait pas de mésappariements. Elle s'hybride (...) Si tu utilises ton oligo pour screener une banque, pour *hybrider un southern*, tout ce que tu veux...".

Une conséquence très importante de la familiarité à l'anglais écrit, c'est la différence d'exigence à l'égard des deux langues. L'anglais a droit à l'arbitraire ; le français, lui, doit produire des termes motivés, qui définissent exhaustivement le processus visé. Deux exemples permettront de vérifier cette dif-

férence de traitement: "je m'en rappelle pas, faudrait que je me relise... Marquage avec, euh... déplacement du... de la coupure, je crois. Je crois que c'est un truc comme ça. (...) Donc c'est... c'est un marquage de synthèse et avec déplacement de la coupure, pourquoi pas ? Bon mais *nick translation*, c'est bon et ça prend deux mots." et "Tiens, *random priming*, tu fais une amorce avec *hybridation au hasard*, bon je veux bien, mais bon, tu prends une demi-phrase pour remplacer deux mots..."

Un des grands critères avancés est la brièveté, mais on oublie de repérer que la concision de l'anglais tient à ce qu'on ne lui demande pas d'être définitoire. On constate une véritable inhibition devant la dérivation, même parfaitement respectueuse de la syntagmatique de la langue. Donnons un exemple où cette mauvaise conscience est finalement surmontée au prix d'une attitude qui se croit iconoclaste :

"Alors on a pris le dictionnaire, on a cherché *ligation*, on n'a jamais trouvé *ligation*, dans le dictionnaire, on s'est dit 'ça n'existe pas'. On cherche la *ligase*, on va faire une *ligation*, on va *ligaser* (...) J'ai *ligué*, *ligasé*... C'est des barbarismes. Enfin on se comprend."

A se défier ainsi du français et à surévaluer l'anglais à partir d'un a priori sémantique favorable à son égard, on en vient à nier des évidences.

"- Tu as entendu parler de séquence de tête ?
 - Absolument pas. Séquence de tête ? Eventuellement ça peut me dire quelque chose sur l'ARN ...
 - Et une séquence leader ?
 - Ben une séquence leader c'est autre chose... Au niveau d'un peptide, des protéines... la séquence leader, attends, sur l'ARN... "

Ce refus de voir l'identité entre séquence de tête et séquence leader a quelque chose de pathologique. Et pourtant, il ne saurait être question d'abandonner le français, nécessaire à la circulation et à la diffusion de l'information. Il faut donc renoncer au fantasme d'une normalisation facile du français du génie génétique : c'est l'observation des faits de fonctionnement et de dysfonctionnement, dans des interactions variées, qui seule permettra d'aller vers une meilleure régulation, respectueuse des réalités, soucieuse de connaître pour transformer.

LES TRIBUNAUX ET L'AMÉNAGEMENT DES LANGUES AU CANADA¹

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1. INTRODUCTION

Dans les sociétés démocratiques fondées sur la primauté du droit, de nouvelles stratégies sont adoptées afin de réduire la domination hégémonique de groupes privilégiés (Tollefson 1991). Ainsi, les minorités linguistiques, raciales ou ethniques obtiennent graduellement une nouvelle forme de protection nationale et internationale, d'ordre légal et constitutionnel. Or, la promulgation de droits comporte un corollaire : l'interprétation de ces droits par les tribunaux. Au processus législatif s'ajoute donc le processus judiciaire.

Au Canada, en 1982, la *Charte canadienne des droits et libertés* confirmait, dans les articles 16 à 22, les droits linguistiques des minorités de langue officielle (anglais et français). Par ailleurs, l'article 23 de cette *Charte* instituait un nouveau droit, celui à l'instruction dans la langue de la minorité. Pendant les dix premières années d'implantation de la *Charte*, l'article 23 a été porté à interprétation dans vingt-deux litiges, dont deux auprès de la Cour suprême du Canada. Les juges ont alors été appelés à interpréter la nouvelle loi constitutionnelle et à trancher entre les parties en présence. Ce faisant, les juges ont joué un rôle déterminant dans l'aménagement des langues en matière d'éducation, domaine pour lequel ils et elles n'étaient pas spécialement préparés.

Nous exposons ici les résultats d'une déconstruction du texte des deux arrêts ou jugements rendus par la Cour suprême du Canada concernant l'article 23. Nous nous penchons sur les trois aspects suivants, en concentrant l'attention sur les rapports minorités-majorités : (1) les rapports de pouvoir et les enjeux des décisions rendues; (2) les stratégies rhétoriques par lesquelles la Cour a cherché à légitimer ses décisions aux yeux de ses publics; (3) les conclusions relatives au processus d'aménagement des langues minoritaires par les tribunaux.

2. LES JEUX DE POUVOIR ET LES ENJEUX DES DÉCISIONS RENDUES

Le premier arrêt (1984) concerne l'affaire *Quebec Association of Protestant School Boards c. le Procureur Général du Québec (QAPSB)*. Le deuxième (1990) tranche un litige opposant les Franco-albertains et le gouvernement de l'Alberta; il est connu sous le nom de *Mahé et als c. la Reine de l'Alberta*. Chacun de ces arrêts révèle un rapport de force entre deux ordres de gouvernement : dans un cas

comme dans l'autre, une législation provinciale est mise en cause par la *Charte nationale*. Le premier arrêt est interprété comme une défaite cuisante pour le gouvernement du Québec et sa *Charte de la langue française*, la *Loi 101* (1977), au profit de la *Charte canadienne des droits et libertés*. Le deuxième est perçu comme une victoire judiciaire déterminante pour les minorités francophones du pays. Dans les deux cas, l'idéologie nationale (fédérale) de la dualité linguistique, de l'égalité des langues officielles et de la mobilité territoriale a prévalu. Dans les deux cas également, le fond des litiges met en jeu l'affermissement ou l'appropriation d'un pouvoir décisionnel en matière d'aménagement linguistique et culturel.

Dans l'affaire *QAPSB*, le gouvernement du Québec invoque des arguments d'ordre sociolinguistique. Selon lui, le fait de limiter l'accès à l'école anglaise principalement aux enfants de parents ayant reçu l'instruction en anglais au Québec, constitue une limite raisonnable et conforme à l'article 1 de la *Charte canadienne*, dans la mesure où le Québec veut protéger la langue française, minoritaire au Canada et en Amérique du Nord. En tant que représentant de la minorité franco-qubécoise au sein de l'ensemble canadien, il revendique le pouvoir de décider, sur son territoire, des mesures de protection du français et celui de préciser les accommodements à apporter pour sa minorité de langue anglaise. La *Loi 101* qui est antérieure à la *Charte canadienne* établissait pour le Québec des règles que le gouvernement fédéral vient modifier au moyen de l'article 23 et ceci en matière d'éducation, un domaine dévolu aux provinces par l'article 93 de l'*Acte de l'Amérique du Nord Britannique* de 1867.

Dans l'affaire *Mahé*, la minorité de langue française demandait notamment à la Cour suprême de confirmer son droit de gérer et de contrôler le processus de décision affectant son système scolaire. Les parents minoritaires alléguaiient que les mots "établissements de la minorité" au paragraphe (3)b) de l'article 23, sans expliciter comme tel ce droit de gestion, le contient néanmoins en substance. Certains gouvernements provinciaux, en particulier l'Alberta, contestaient cette interprétation de l'article 23. La Cour a cependant donné raison à la minorité francophone. Dans cette affaire comme dans celle du *QAPSB*, les minorités ont trouvé un allié auprès du gouvernement fédéral qui a fait valoir l'importance de la survie des minorités de langue officielle pour un Canada bilingue.

A l'instar de Knopff et Morton (1991 : 379), nous en concluons que la Cour suprême a généralement privilégié les minorités locales (anglophone du Québec et francophones des autres provinces) contre les majorités locales (provinciales), tandis qu'au plan national, elle a fait prévaloir l'intérêt de la majorité politique. Ainsi, la Cour a confirmé la prédominance des minorités locales et du gouvernement fédéral, et contraint les majorités provinciales à se conformer aux normes nationales. Ce qui diffère en fait entre les deux arrêts, nous le verrons maintenant, c'est l'attitude de la Cour selon qu'il s'agit du Québec, envers qui elle se montre inflexible, ou des autres provinces, pour lesquelles elle fait preuve de prudence.

3. LES STRATÉGIES RHÉTORIQUES DE LA COUR ET SES PUBLICS

Le texte de l'arrêt dans la cause *Mahé* (46 pages) s'avère plus nettement étayé que celui dans l'affaire *QAPSB* (29 pages). Du point de vue de sa cohérence et de son argumentation, l'arrêt de 1990 apparaît plus élaboré et plus méthodique que celui de 1984 qui tranche par son caractère plus politique et moins nuancé.

Dans l'affaire *QAPSB*, l'argumentation de la Cour se résume comme suit. L'article 23 s'avère unique au monde, ayant été conçu en fonction spécifiquement du contexte canadien contemporain. Il est donc inopportun d'invoquer, comme le fait le gouvernement du Québec, des précédents internationaux à caractère universaliste, qu'ils soient d'ordre sociolinguistique ou légal. En outre, le Québec est la seule province canadienne à démontrer depuis dix ans une tendance limitative face à l'éducation de sa minorité anglophone. Les rédacteurs de l'article 23, conclut la Cour, ont voulu rectifier cette tendance. En conséquence, de dire la Cour, la *Loi 101* constitue l'exemple d'un "régime à réformer" et s'avère incompatible avec la *Charte canadienne* qui a préséance sur la *Charte québécoise*.

La Cour refuse donc d'emblée d'argumenter sur le même terrain que celui du Procureur général du Québec, soit le terrain de la sociolinguistique. Ce refus entraîne la négation de l'entité québécoise et de ses besoins en tant que minorité francophone au sein de l'ensemble canadien. Le jugement ne se penche pas non plus sur les besoins de la minorité anglophone du Québec, qui constituent le cœur du débat. En somme, la Cour suprême se préoccupe ici davantage du rapport de force entre les gouvernements impliqués, que du but même de l'article 23, à savoir la survie d'une minorité au moyen du droit à l'éducation. En fait, l'argumentation de la Cour suprême s'enlise dans une certaine circularité: la *Loi 101* est incompatible avec l'article 23 parce qu'ainsi l'ont voulu ses rédacteurs. Mandel écrit à ce sujet: "[the Court] obviously felt that "holding its nose" and getting on with it would do less damage to the general Charter enterprise than trying to dress up the exception in some ill-fitting general principle" (1991 : 111).

Dans l'affaire *Mahé*, la Cour se montre plus soucieuse de présenter un discours convaincant et modéré. Elle semble surtout vouloir persuader les gouvernements provinciaux anglophones et leurs majorités des vertus de la dualité linguistique. Elle s'applique notamment à démontrer que les coûts à engager ne sont ni énormes ni exagérés et que la réorganisation nécessitée par l'article 23 est mineure. Elle cherche à minimiser les conséquences politiques et pratiques de l'arrêt et à éviter les polémiques infructueuses. Dans son argumentation, la Cour se place souvent sur le terrain sociolinguistique, ce qu'elle avait refusé de faire dans la cause précédente. La Cour invoque notamment le caractère innovateur et réparateur de l'article 23. Elle fait valoir le principe de l'égalité des deux groupes de langue officielle, dont l'article 23 constitue la clé de voute, ainsi que la diversité des moyens pour appliquer ce principe. Elle reconnaît également les liens intimes entre langue et culture et insiste sur l'importance de l'institution scolaire pour la survie et la promotion des minorités. Une autre élément, crucial celui-là: la Cour postule l'importance de confier aux minorités la gestion de leur système scolaire, parce qu'elle permet de réduire le contrôle hégémonique des majorités.

Dans sa décision, la Cour adopte finalement une attitude de prudence. D'une part, elle refuse de trancher sur l'ensemble des questions complexes que soulève à son avis l'article 23, en concentrant son attention sur un seul aspect, soit la question de la gestion scolaire; pour elle, l'interprétation de l'article 23 constitue un processus à long terme, qui ne saurait être traité en un seul arrêt. D'autre part, la Cour s'efforce visiblement d'accommoder les gouvernements provinciaux, dans la mesure où elle laisse à leur discrétion les moyens à prendre pour se conformer au jugement et où elle refuse d'invalider les lois provinciales.

Les deux arrêts, en dépit de leurs stratégies discursives différentes, paraissent essentiellement politiques, dans la mesure où ils visent prioritairement à faire reconnaître par les gouvernements provinciaux la primauté de la *Charte fédérale*. Ainsi, l'auditoire virtuel principal dans la cause *QAPSB* était la majorité anglophone canadienne, qui attendait une mise au pas du gouvernement du Québec. Dans la cause *Mahé*, l'auditoire virtuel est multiple : d'abord la majorité anglophone et ses gouvernements provinciaux, ensuite les minorités francophones.

4. CONCLUSION

Si les systèmes législatif et judiciaire sont en principe séparés, à la lumière de ce qui précède il appert que ces systèmes, dans la pratique, s'influencent mutuellement. L'analyse des deux arrêts de la Cour suprême du Canada démontre que le processus d'interprétation judiciaire est intimement lié au contexte politique d'énonciation et de mise en oeuvre du droit. Dans le cas canadien, il est clair que les minorités de langue officielle ont vu, au cours du processus judiciaire, leurs causes entraînées dans l'engrenage des rapports de pouvoir provincial-fédéral. Le judiciaire ne constitue pas nécessairement un moyen indépendant d'aménagement des langues et les minorités n'y trouvent pas toujours un arbitre impartial. C'est la première constatation qui découle de nos travaux.

On peut par ailleurs s'interroger sur la manière dont la Cour a établi ses normes dans un domaine qui lui est étranger, celui de la sociolinguistique et de l'aménagement des langues. Le jugement du *QAPSB* a ni plus ni moins évincé toute argumentation de cette nature. Il en fut autrement dans la cause *Mahé*, la Cour s'étant longuement penchée sur ces questions. Si la Cour, dans l'affaire *QAPSB*, avait développé une argumentation semblable à celle élaborée dans l'affaire *Mahé*, ses conclusions auraient sûrement été très différentes. Elle aurait eu à tenir compte du fait que la francophonie québécoise, pour pouvoir se maintenir en tant que minorité au Canada et en Amérique du Nord, doit bénéficier d'une autonomie décisionnelle en matière d'aménagement linguistique et culturel.

A la lumière de notre analyse, pouvons-nous affirmer que le processus judiciaire constitue un processus viable et éclairé pour l'aménagement des langues? Sans conteste, les jugements ont été favorables aux minorités sur le plan local (provincial), puisque la Charte elle-même s'en faisait la protectrice. De ce point de vue, le processus judiciaire est apparu comme un moyen efficace pour contrer l'hégémonie des majorités au plan local. Cependant, au plan national, il demeure trop assujetti au processus politique. Aussi, des moyens devraient être mis en oeuvre afin de dépolitisier et de mieux éclairer les décisions. L'un de ces moyens est d'apporter au droit la contribution de la sociolinguistique.

6. NOTES

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LANGUAGE POLICY IN THE MULTINATIONAL
STATE: LANGUAGES OF MINORITIES

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There are over fifty minority peoples on the territory of the ex-USSR: there are over twenty of them in the Far North and over thirty in the Caucasus. In accordance with the Law named "The Basis of the Legal Status of the Minority Peoples of the Russian Federation", passed by the Supreme Soviet of Russia in June, 1992, a minority people is an ethnic minority which comprises less than 50,000 members and inhabits a territory which it has been traditionally occupied for centuries.

There is a growing interest in the revival and promotion of the minority languages: legal acts on the linguistic policies are being passed, funds are being set up, programs for their development are being elaborated, written forms of some languages are being developed and training in some of the minority languages is being organized. These measures are part and parcel of the general language planning process taking place on the territory of Russia and of the Commonwealth of the Independent States on the whole. They testify to a new stage in the process of the language construction, the first stage of which comprises the 1920-30's, when more than 50 languages received the alphabets and spelling and grammar rules and became written languages. Written forms have now been elaborated or are being elaborated for the Orotch, Negidal, Udege, Saam, Veps and Karel languages. The reconstruction of the written forms of the Shugnan and Beludjain languages is now under consideration. In September, 1992, the Tsakhur, Ogul, and Rutul languages will start to be taught in schools, the ABC-books for them are being printed. All these measures are in line with the general process of the intentional influence upon the language on the part of the society. This influence is being carried out on a much larger scale than in the previous decades. It comprises passing the legal framework for the languages usages in

different spheres of the organized communication: in administration, education, mass media and books publishing.

Now we shall focus on some problems and controversial issues connected with the topic. The process of the recovery of the minority languages makes it necessary for the language planners to decide whether the languages are capable of independent living and functioning and whether there are chances of their application in various spheres of communication. Their chances are weakened now by the transition to the market economy.

In accordance with the mentioned above limit of under 50,000 members, the notion of the minority people can not comprise such ethnic communities as that of Carachayevs (131,000 people), that of Adygs (109,000 people), that of Laks 5100,000 people), that of Tabasarans (75,000 people), Balkars (66,000 people) and that of Nogaians (60,000 people). The imposition of such strict limits upon the number of minority peoples can not be wise. The number of the members is by no means the only criterion of a minority people. Another criterion is the languages lack of the written form or its insufficient development, which has negative repercussions upon the languages' use in education and culture. The insufficient functional development of this kind of languages is generally compensated by the speakers' application of other languages which leads to bi- or multilingualism. Thus, the inadequate development of a literary language preserves dialects in a bilingual community.

The survival chances of the minority peoples' languages depend on the ethnic, social, demographic and cultural factors. These factors include the prevailing age levels of the speakers, the ethnic character of their marriages, the family or out-of-family way of upbringing children, the place of the residence of the ethnicity, its language contacts, the form of its existence (the traditional or the modernized one), the level of the national self-consciousness, the scale of teaching the ethnicity's language in school and the state linguistic policy.

The demographic factors. Alongside to the number of the language speakers, the compact or scattered way of a minority people's living affects the language's survival chances, creating different conditions for its development. The scattered way a people's living affects negatively its language's development. For example, the ethnic minorities of the Far North and Siberia are scattered over vast territories, comprising 64% of Russia's. This gives rise to the considerable dialectal diversity of their languages. The compactly living Caucasian peoples have much more favourable conditions for the survival and development of

their languages. Still, the situation in the Caucasus is worsened by another tricky problem: the representatives of the same nationality happen to live on the territory of two republics. Thus, the Tsakhurs and Tats inhabit the territories of Dagestan and Azerbaijan, the Abazins - those of Adygea and Karachayev-Cherkessia, the Aisors - the lands of Georgia and Armenia. The negative impact of the minority peoples' scatteredness upon their language life has grown nowadays, because the representatives of the same people appear to be under different linguistic policies. It was not the case when all the republics constituted the single state of the USSR, on the territory of which the unified linguistic policy was pursued.

The ages of the language speakers are also of importance when the issue of the language's vitality is considered. If the language is spoken by the younger part of the community as well as by the adults, the language will not die in the nearest forty-fifty years. If the youngsters have no command of the language of their parents, it has no chances to survive unless a special linguistic policy is executed in this domain on purpose to preserve and develop the language.

Linguo-cultural factors comprise the existence or absence of the written form of a language, its teaching in school and the ethnicity's language contacts. If a language possesses the written form it has more chances to be preserved because when fixed on paper the language can go on living in the form of texts of different nature. The language's school teaching is also a way to preserve the language because the school is the main channel of spreading. That is why the language planners of various republics have been setting greater store by the school teaching's role in preserving and promoting the languages. An ethnicity's language contacts can also affect the survival processes of minority languages: the increase in the number of the contacts have negative repercussions on the vitality of a minority language. Especially unfavourable are the contacts with the language which outranks the others in prestige and instrumental value, such are the contacts of the Aleut, Escimo, Yukagir, Nivkh, Selkup and other languages, on the one hand, and the Russian language as the language of social prestige and social promotion, on the other hand.

Psychologically-social factors. The main factor among them is the level of the national self-consciousness. Its higher level contributes to overcoming negative trends in the language's functioning. Its low level leads to the degeneration of the language functions. The survival chances of a language is also influenced by the speakers' value systems, their preferences and their language competence.

The state's national linguistic policy regulates an ethnicity's life and, to a certain extent, the functioning of its language. Only the organized communication can be regulated. The spontaneous informal communication has its own laws unsusceptible to the state regulation. The national policy of the USSR which was aimed at merging of the nationalities and their languages brought about the reduction of the languages' functions. This policy was implemented through certain actions: some minority peoples were forced to leave their traditional places of residence and inhabit the new, completely unknown to them areas, traditional food was sometimes forbidden, nomads were made to give up their ways of life and so on.

The today's national policy tries to take into account the multiplicity of the nationalities, and the diversity of their cultures and languages. It has given up the idea of merging the nationalities and tries to consider value systems and preferences of different ethnic groups. This is the individual approach to every minority people, its culture and language. The new trends in the national policies rise the importance of concrete ethno-sociolinguistic descriptions of every minority people, because concrete and realistic programs aimed at the languages preservation and development can be based only on detailed investigations of the language biographies of the minority peoples.

Practical solutions to the existing language problems demand investigations of the places of residence of the minority peoples and elaborating, on the basis of these investigations, linguistic policies aimed at promoting the languages. The generalizing approach to the minority peoples' problems is dangerous, because what is true for one ethnic community may be of no use for another.

To preserve the minority peoples' languages it is necessary to define the spheres of communication where the languages can really be employed. Then the language planners should elaborate and put into practice purposeful activities to revive and develop the languages' functions and to promote the languages into the spheres of communication where their application is really necessary and possible. The rational linguistic policy can have a positive effect upon the ethnic life of the minority peoples and make it civilized and conforming to the peoples' needs.

FRANCISATION, NORMALIZATION, AND BILINGUAL
EDUCATION: ADVANTAGES AND DISADVANTAGES OF
"HEAVY" AND "LIGHT" LANGUAGE PLANNING

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1. INTRODUCTION

In this presentation of three types of language planning, I do not attempt to provide an exhaustive analysis of the subject. Instead, I shall give an overview of Francisation in Quebec, Normalization in Catalonia, and bilingual education in the United States. We shall demonstrate how bilingual education represents the United States' closest approximation to language planning despite its considerable differences with Normalization and Francisation.

2. FRANCISATION

Francisation represents one extreme of the language planning spectrum. No other democratic nation has language laws as strong as Quebec's.

Catalan Normalization occupies the middle ground between Francisation and Bilingual Education. Lacking the legal basis to adopt as forceful a policy of language maintenance and expansion as Quebec, the Catalan autonomous government persuades and encourages, rather than obliges, its citizens to speak Catalan. In the present work, I use the term Francisation to refer to official language planning in Quebec, in its most general sense. Canada's federal system allows the provinces greater freedom than those enjoyed by the individual United States, or the "Autonomies" in Spain. Therefore, Quebec's government can apply more vigorous language laws than Catalans or Americans could.

The unwillingness of certain Anglophones to learn French is related to several factors. While Francophones speak a Romance language and Anglophones use a Germanic one, other sociocultural differences separate the two groups in Canada. Lambert (Lambert, et al, 1960) demonstrated that French had a lower social status (formal prestige than English. While the social standing of French has certainly increased in the province of Quebec, the traditional perception of French as a second-class linguistic citizen in Canada has certainly hurt the

minority language. Overall, the barriers between Anglophones and Francophones in Quebec seem more difficult to cross than the ethnolinguistic border in Catalonia.

One means of measuring the actual power and importance of language planning agencies in different nations is to examine their location in the government hierarchy. Among the areas studied, Quebec again accords the highest rank to its planning office. One minister is in charge of Municipal Affairs, Bill 101, and Public Security in Quebec. Making application of the language law part of a minister's title gives it an importance it does not possess elsewhere. Low birth rates in Quebec make strong language laws an imperative.

3. NORMALIZATION

Legally and administratively, Catalan language planners are in a less favorable position than the counterparts in Quebec. To borrow from current linguistic terminology (see Pazos 1990) Francisation is "heavier" than Catalan Normalization. While a Québécois minister oversees the application of the language law, the Catalan Normalization office reports to the Culture Minister. Even within the government hierarchy, Catalan language planning occupies a lower position than Francisation policies. In terms of language designations, Catalonia has two official tongues: Castilian and Catalan. Unlike French in Canada, Catalan does not enjoy official or co-official status throughout Spain.

Perhaps two of Catalan's greatest assets in the linguistic conflict are 1) the ethnolinguistic similarities of a castellanoparlante and a catalanoparlant, and 2) the high demographic density of the Principat. My research indicates that, on balance, high density favors linguist recruitment by the Catalans. On the negative side, Catalonia suffers from low birth rates among native-born Catalans.

4. BILINGUAL EDUCATION

Under the Bush Administration, the federal office of Bilingual Education designates "teaching students English" (Esquivel 1990) as the main goal of Bilingual Education. It does not advocate minority language maintenance as a goal.

This sets it apart from Normalization and Francisation. The 1968 Bilingual Education Act (Title VII, amendment of the Elementary and Secondary Act of 1965), and subsequent decisions and legislation, required that certain students receive some instruction in their native languages (Sonntag and Pool 1987: 49-50). While the federal legislation has modified its emphasis over the years, the overall focus has never been ethnolinguistic preservation.

In the United States, over 100 languages of instruction are used in elementary and secondary schools.

Nevertheless, like Canada, a single language constitutes the biggest piece in the national cultural mosaic. Over sixty-five percent of expenditures for Bilingual Education funds Spanish English programs. With local and state financing of schools, great disparities exist between bilingual programs. We find at least three types of operational bilingual programs. Among the worst options available to students are the "pull-out" programs. Teaching is in the dominant language all day; then, the student is "pulled out" of a class for a few minutes, or an hour. "Transitional bilingual programs" sometimes teach in the home language. Finally, some "enrichment" programs have minority students learn English while Anglophones learn the minority language. In some embattled inner city districts, the upbeat, well-organized bilingual program stands out as a bright spot in a desolate urban area.

If our overview of bilingual education seems only a brief summary of a complex concept, such brevity results from the local nature of school financing and control. The hierarchical position of Bilingual Education reflects its standing among U.S. Policy issues: Bilingual Education merits an "office" within the Department of Education at the federal level. Meanwhile, Hispanics have the highest birth rate of any ethnic group in the United States.

5. CONCLUSION

Our brief overview of three types of language planning, from the "heaviest" to the "lightest," I elucidated numerous similarities and dissimilarities among them. The Catalan and Québécois linguistic conflicts are clearly reflected in laws, education, national television, and in day-to-day debates. Only in the American "commonwealth" of Puerto Rico does a Quebec-style ethnolinguistic debate take place. The North American preference for living in free-standing, single-family homes, often in ethnically uniform neighborhoods, exacerbates ethnolinguistic division. Two trends that have changed the face of America are a) the impressively high Hispanic birth rates, and b) Spanish's occupying the top position among languages learned at colleges and universities. Legally, the U.S. has no designated official language.

Catalan Normalization took much of its initial inspiration from Quebec's language laws. However, Catalan planners have distanced themselves somewhat from Quebec's "impositional" tactics. Catalan seems uniquely suited to a policy of consensus and cooperation. The "light" Catalonianization can work because of a) the similarity of the ethnolinguistics groups b) Catalan's and Castilian's common Latin heritage, c) Catalan's high prestige, and d) the demographic/domestic situation in Catalonia. Apartment-dwelling Catalans and Castilians must meet in the crowded streets, or even in the lobbies, of their

buildings.

From constitutional latitude, to legislative and administrative support, Quebec uses the "heaviest" tactics in its language battle. Quebec fights dropping Francophone birth rates and negative attitudes towards French through "baby bonuses" and obligatory French-Language schooling. Still, we can isolate some advantages of the Catalan approach. The Catalans lose the symbolic linguistic battle over signs and mass communication. Nevertheless, Catalan's formal prestige, institutional support, and interpersonal means of spreading its influence may help it win "market dominance" in the integrated Europe of post-1992.

The "heavy" Quebec politics often win the minds, but, not the hearts of Anglophone potential recruits. Even in an independent Quebec, making Anglophones and multilingual immigrants want to become part of Francophone society represents a better option than requiring them to pay lip service to the fait français. The minority speaker encouraging the non-speaker to use the local speech obviates the dangers of majority backlash. A "heavy" institutional policy, combined with a "light" interpersonal approach, may represent the best configuration for low birth rate minority languages.

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SECTION 10

APPRENTISSAGE DES LANGUES

LANGUAGE LEARNING

**LES GENRES LITTERAIRES ET LES TYPOLOGIES TEXTUELLES
LOGIQUES COMMUNES. STRATEGIES POUR FACILITER
L'APPRENTISSAGE DU TEXTE ECRIT**

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1 LES GENRES LITTERAIRES ET LES CONSTANTES GÉNÉRIQUES

Comme l'a dit Tomasevskij , les genres littéraires sont des types spécifiques d'oeuvres, se caractérisant par une somme de procédés ou traits constructifs dominants, types qui se développent par l'incorporation de nouveaux textes, liés par leur forme à ceux qui existent déjà (Tomasevskij 1982: 214). Ce sont des bons modèles textuels, d'une grande utilité didactique pour comprendre les œuvres et la littérature comme un tout.

Les critères qui ont rendu possible la distinction des différents genres littéraires ont été divers au long de l'histoire. La première division générique est celle que Platon fait dans la République. Le jugement qu'il suivit est celui de la modalité d'énonciation. De cette façon, selon que l'auteur raconte, imite ou mélange les deux, nous aurons les genres narrative, mimétique et mixte. Aristote réduira cette triade à deux genres , mais il y introduira une autre distinction, sémantique, selon que le poète représente des hommes meilleurs ou pires que nous. De l'intersection des modes et objets représentés, on obtient une double dichotomie: tragédie/ comédie et épopée/ parodie.

Le genre lyrique n'apparaît pas jusqu'au romantisme. F. Schlegel, et après Hegel, partageront la littérature en trois genres: le lyrisme ou la subjectivité, l'épopée ou l'objectivité et le drame qui est à la fois subjectif et objectif. Cette nouvelle classification sera celle qui prédominera jusqu'au XXème siècle, avec différentes reformulations des critères, comme celles de T. Elyot ou N. Frye. Les axes de ces classifications sont au nombre de deux: l'énonciation et le thème. P. Hernadi (1972) constatait, il y a déjà quelques années, l'importance d'élargir les coordonnées pour les classifications génératives.

Comme Schaefer (1989: 63) l'a écrit, personne n'a réussi à aller plus loin que Aristote. Deux problèmes principaux se posent devant cette classification: premièrement, l'esprit macrogénérique des trois genres fondamentaux et la grande quantité de sous-genres qui sont nés au long de l'histoire. Deuxièmement, le nouveau rôle de la littérature dans une culture qui fait usage d'autres moyens, qui ne sont pas ceux du langage écrit.

J. M. Schaeffer (1989: 185), après avoir passé en revue les différents critères génératifs au long de l'histoire littéraire,

a observé la présence de quatre invariables: tout texte littéraire est un acte communicatif, il a une structure extrapolable, il se situe par rapport à d'autres textes et enfin tout texte ressemble à d'autres textes.

Comme a déjà observé T.Todorov (1978: 53), les genres ne sont rien d'autre que des types de discours ou d'actes de parole. A partir de cette considération, Schaeffer montre l'apparent manque de cohérence des noms de genres par la complexité sémiotique de l'acte verbal. Ainsi des genres surgissent pour les différents éléments du cadre communicationnel: le type d'énonciateur, acte énonciatif ou modalité d'énonciation; le destinataire ou la nature de la destination; et le type de fonction : illocutoire ou perlocutoire, sérieuse ou ludique, etc. Mais d'autres genres dérivent de la réalisation de l'acte discursif, soit par la prédominance de certains traits thématiques soit par la réalisation syntaxique, micro ou macrostructurale.

On peut noter que les différents noms ne se réfèrent pas tous à un seul niveau de l'acte discursif, mais que la plupart se réfèrent à plusieurs facteurs à la fois. Il faut aussi penser à la dimension historique et culturelle, laquelle permet d'établir les relations entre les textes et les "pourquoi" de leur évolution.

Depuis cette perspective, on voit les genres dans toute leur complexité textuelle et culturelle. D'autre part, la relation qu'ils ont avec le langage est plus évident. Comme M. Glowinski l'a souligné (Angenot 1989: 84), les genres ont servi de modèles pour discerner d'autres domaines de l'écriture et ils ont permis de dégager avec beaucoup de clarté des éléments qui distinguent le discours littéraire des autres types de discours. Cela nous permet de les comparer avec les genres de textes non-littéraires.

2. LES TYPOLOGIES TEXTUELLES ET LES CRITERES DE CLASSIFICATION

Les types textuels sont des modèles qui groupent les textes selon certaines règles et qui s'avèrent très utiles autant pour déterminer la validité des normes qui réglementent l'élaboration et la réception des textes, que pour analyser des textes particuliers et préciser leur intertextualité (Isenberg 1983). En même temps, les types textuels sont très utiles didactiquement parlant parce qu'ils représentent une économie quand il s'agit de proposer des modèles pour la production des textes.

Mais, à la différence des genres, où la théorie semblait ne pas pouvoir se détacher de la tradition de trois genres fondamentaux, dans le cas des typologies textuelles, il y a beaucoup de propositions. Les critères pour les établir peuvent être externes ou internes et ils coïncident, en lignes générales, avec ceux que J.M.Schaeffer a établi pour les genres littéraires. Ainsi, il y a abondance de classifications qui se fondent sur les différents éléments du cadre communicationnel. Par exemple, la typologie qu'on propose à partir la grammaire systémico-fonctionnelle, spécialement celle que M.A.K.Halliday (1978) a proposée, qui part de trois aspects de la situation communicative: le champ (le thème et l'intention du parlant), le teneur (le type d'interaction et les relations qui s'établissent entre les interlocuteurs) et le mode (le canal et le mode rhétorique ou fonction communicative). Cette typologie a été appliquée de façon

didactique, spécialement en Australie, où l'apprentissage du texte écrit a été totalement rattaché à la pratique langagière, de sorte qu'on part d'une suite de textes que les écoliers utilisent dans leur vie quotidienne (March & Hensen 1986).

D'autres typologies mettent l'accent sur la réalisation interne du texte, spécialement sur sa structuration, ses éléments linguistiques prépondérants ou son organisation sémantique. Dans ce champ surgissent les typologies basées sur les dénommés marques linguistiques de surface, comme ceux de J. Simonin-Grumbach ou de J.P. Bronckart, développées à partir des trois types d'énonciation identifiés par Benveniste: le discours, l'histoire et le discours relaté.

Or, nous pouvons trouver davantage de typologies qui sont en rapport avec des facteurs textuels internes autant qu'externes. Une des plus connues est celle d'E. Werlich (1979). Cette typologie distingue cinq types textuels, par rapport au type d'acte locuteur réalisé, la progression cognitive caractéristique de chacun et les structures des phrases qui forment la base textuelle: le descriptif, le narratif, l'expositif, l'argumentatif et l'instructif. A partir de cette classification et de ces critères, J.M. Adam (1985) en propose une autre, composée de huit textes associés aux principaux actes discursifs : narratif, descriptif, explicatif, argumentatif, injonctif, prédictif, conversationnel et rhétorique. Bien que certains des types ajoutés par Adam ne sont pas suffisamment clairs ou ne possèdent pas la même base d'homogénéisation, cette typologie a été assez utilisée en France et aussi en Catalogne, pour l'apprentissage de la production et de la réception des textes.

3. RAPPORT ENTRE GENRES LITTÉRAIRES ET TYPOLOGIES TEXTUELLES. IMPORTANCE D'UN TRAITEMENT DIDACTIQUE PARALLÈLE POUR L'ENSEIGNEMENT DE LA LANGUE ET DE LA LITTÉRATURE

Nous avons vu que les genres littéraires et les typologies textuelles suivent des logiques communes, car elles sont basées sur les différents éléments de l'acte communicationnel, sur la réalisation textuelle ou sur une union des traits d'un et d'un autre champ. Les principales différences résideraient dans l'historicité du texte littéraire et dans son caractère imitatif. D'autre part, il est évident que les constantes génératives observées par Schaeffer sont aussi appliquées aux typologies textuelles.

A propos de ces parallélismes, il faudrait les employer utilement pour un meilleur enseignement à la fois de la langue et de la littérature. Cela signifierait l'utilisation d'une même typologie ou, du moins, des mêmes critères de distinction de textes, impliquerait l'usage parallèle de textes littéraires et non-littéraires, imposerait la comparaison comme le processus le plus adéquat à la généralisation et, logiquement, cela supposerait des traitements didactiques d'analyse et de production de textes identiques.

L'enseignement parallèle de la langue et de la littérature facilite la compréhension du texte dans sa totalité et rend plus compréhensible la spécificité de la littérature et la connaissance des caractéristiques du registre littéraire. Il introduit

aussi l'élève d'une façon naturelle à la connaissance du milieu et de la tradition culturelle propres à la langue qu'on est en train d'étudier et il améliore la capacité expressive de cet élève.

Si nous observons quelques-unes des typologies textuelles, dont on a fait une application didactique, nous pourrons voir que beaucoup d'entre elles contiennent autant des textes littéraires que non-littéraires. De la même façon, beaucoup de genres ou sous-genres littéraires auraient aussi leur correspondant non-littéraire. Or, nous nous décantons pour une proposition plus globale, qui part des logiques génériques mêmes.

4. PROPOSITION DIDACTIQUE D'APPRENTISSAGE DU TEXTE ECRIT, A PARTIR DES LOGIQUES GENERIQUES

Nous proposons de travailler à partir d'une diversité de textes groupés autour de six axes, qui surgissent du cadre de l'acte discursif: l'énonciation (divisible en type d'énonciateur et modalité d'énonciation), le destinataire, la fonction, le thème, l'organisation macrodiscursive et le style.

Chaque groupe comprendrait des textes littéraires et non-littéraires qui démontreraient par des exemples les possibilités les plus importantes. Le processus de travail que les élèves devraient suivre se centrerait sur l'analyse comparative et contrastive des textes, la réalisation d'exercices divers, consistant à transformer ou à compléter des mêmes textes et produire des textes semblables aux modèles.

Nous croyons qu'à partir de cette progression, l'élève apprend facilement à adapter ses rédactions aux différentes situations communicatives possibles, qu'il sait structurer clairement ses textes et qu'il choisit le lexique et les marques linguistiques qui conviennent le mieux à ses messages. En plus, il identifie sans hésiter les principales caractéristiques des textes littéraires et il connaît plus profondément la culture à laquelle appartient la langue qu'il est en train d'étudier.

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JUDGING THE GRAMMATICALITY OF AMBIGUOUS SENTENCES IN A SECOND LANGUAGE

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1. INTRODUCTION

Judgments as to the grammaticality and related properties of sentences, proposed by linguists to test hypothesized rules of languages, have been the stock in trade of descriptive and theoretical linguistics for a large part of the twentieth century. It has long been clear that the description of living languages requires eliciting such judgments, since no corpora, written or oral, can ever guarantee exhaustivity, neither with respect to the form of possible constructions, nor with respect to the constraints on those possibilities.

The central role of linguistic judgments in laying the groundwork for linguistic, specifically syntactic, descriptions has led to an interest in the properties of such judgments, as a topic in psycholinguistics (Fillmore 1979, Gleitman and Gleitman 1979, Ross 1979, Carroll, Bever and Pollack 1981, Ryan and Ledger 1984). Not only has linguistic description and theorization required that native speakers pronounce on the grammaticality of crucial hypothetical constructions; in addition, the possibility of certain constructions being judged ambiguous played a central role in the formulation and defence of the theoretical construct of (syntactic) deep, as opposed to surface, structure, in what had become known as the standard theory of generative grammar (Chomsky 1965). Since theory construction depended so crucially on the speaker's ability to furnish grammaticality and ambiguity judgments, it became important to understand what the speaker was doing in making them.

One tacit point of agreement as to their nature, which has remained axiomatic in psycholinguistics, is that such judgments constitute a type of performance which reflects competence in a linguistically "purer" form than mere production does, since the act of passing on hypothetical constructions forces the speaker to concentrate, at some level of consciousness (if not explicitness), on the abstract grammar and its limits. This is why the study of language learners and acquirers has also turned to linguistic, and especially grammaticality judgments, in the search for a window on the development of L2 competence, and on the limits to that development (Chaudron 1983, Coppieters 1987, Birdsong 1989).

2. OUR STUDY

The present paper will attempt to contribute to the study of linguistic judgments, in L₁ and especially in L₂. It will however, focus particularly on the relation between syntactic ambiguity, on the one hand, and the grammaticality judgments furnished by native and non-native speakers having different levels of knowledge of the L₂, on the other.

Eleven adult Anglophones studying for an M.A. in French to English translation, 24 adult Francophones, beginning a B.A. in English to French translation, and 31 adult Francophone "advanced intermediate" English L₂ learners judged the grammaticality of 22 English sentences, organized in four "paradigms" on a written questionnaire: (a) "reflexive" constructions, followed by infinitival or sentential complements (cf. e.g. *Peter has shown himself to be a fool: Peter has shown himself that he is a fool*); (b) hypothetical conditional *might*, in combination with word-order variation (*There might be Peter a candidate for the job: A candidate for the job might be Peter*); (c) realis and irrealis *might* conditionals (*If John has appealed to the voters, he might be elected: If John has appealed to the voters, he might have been elected*); and (d) "causative" verbs followed by a lexical verb, with or without *to* (*The Party made the candidate to run: The party made the candidate run*). Preceding each of the four "paradigms" was the same question: «Indépendamment de leur sens, les phrases suivantes sont-elles grammatisques ?» ('Independently of their meaning, are the following sentences grammatical?'). To the right of each sentence was the alternative OUI NON . In separate questionnaires, each informant provided his or her age, mother tongue, principal language of instruction at school and university, number of years of university study, and relative difficulty in understanding written English texts, on a scale of one to eight. The "principal language", i.e. the main language of schooling and/or (usually and) the mother tongue, in the case of all informants studied here, was French or, in the case of the 11-member control group, English. A number of L₂ acquisition studies have shown that such gross psycho-social variables as age, educational level, and self-evaluated L₂ competence can correlate significantly with a variety of measures of L₂ performance.

3. RESULTS

In this brief account, however, we will focus our examination of the study's results on the relation between the possibility of more than one reading (i.e. syntactic ambiguity) and the grammaticality judgments on these sentences, by the native and the two groups of non-native speakers. The fundamental question is whether syntactic ambiguity as such is associated with grammaticality judgments which diverge within native speaker and learner groups, on the one hand, and between native and learner groups, on the other. To answer this question, we will compare the results for the test as a whole with those for the sentences which had two readings, for both of which the sentence form was clearly fully grammatical (The numbering is that of our questionnaire):

- (7c) Peter has proven himself to be a fool.
- (7d) Peter has shown himself that he is a fool.
- (10f) The Party had the candidate run.

The "correct" judgments were those of the anglophone linguist-corrector, who became bilingual only in adult life and who was not a party to the hypotheses underlying the study. Table I gives, for the informants as a whole, and for each of four sub-groups, the means and standard deviations for the grammaticality test as a whole and for these three sentences individually. Do the means or the standard deviations suggest that these sentences posed an

extraordinary grammaticality judgment problem to the informants, compared to the test as a whole?

Table I: Test and Ambiguous Test Sentences: Correct Judgments

Groups	N	22 sentences	Sent.	7c	Sent.	7d	Sent.	10f
			X	s	X	s	X	s
All	66	16.061	2.625	.561	.5	.758	.432	.485
Anglophones	11	18.818	2.089	.818	.405	.636	.505	.636
All Franco	55	15.509	2.372	.509	.505	.782	.417	.455
Franco Trans	24	16.708	2.074	.625	.495	.875	.338	.625
Franco ESL	31	14.581	2.187	.419	.502	.71	.461	.323
								.475

On the basis of this table, it is possible to say that sentence (10f) was more difficult than the test as a whole, and that all the standard deviations for the individual questions (except 7d for the Translation students) are quite high, given that for each question, the minimum is 0 and the maximum 1. We cannot convincingly argue on this basis, however, that syntactic ambiguity in itself is associated with extraordinary difficulty in judging grammaticality.

If we look, however, at the sentences for which the judgments of the Anglophone control group failed to correspond to the judgment of the corrector, or to that of the test author (the present writer), we have a new trail to follow:

(7f) Peter has proven himself that he is a fool.

(10c) The Party had the candidate to run.

In the case of (7f), the 11-member Anglophone control group, as well as the Anglophone corrector, rejected the sentence, contrary to the test author and, notably, 75% of the Francophone Translation students. In the case of (10c), the Anglophone corrector, after hesitating, accepted the sentence. As a result, only one of the 11 Anglophones and seven of the 24 Francophone Translation students "got it right".

What is going on here? As mentioned at the beginning of this paper, the first paradigm is characterized by "reflexive" constructions: each of the six sentences in it contained *himself*. In the last paradigm, each of the six sentences contained a "causative" verb: *make*, *have*, and *get* are each used twice. However, in the only interpretation for which (7f) is grammatical, *himself* is not reflexive, but emphatic: 'It is Peter who has proven that he (Peter) is a fool'. (10c), likewise, is only grammatical in a non-causative reading: 'The Party possessed the candidate they needed for the election'. What seems to have happened is that the pressure of the paradigm ("reflexive" in the case of 7f and "causative" for 10c) excluded the one grammatical reading for many respondents, leading to an atypical profile of grammaticality judgments: Many respondents could not see the grammatical reading hidden behind the reflexive or causative one, according to which the sentence contained a syntactic error. Table II, in comparison with Table I, indicates that these two sentences combine high standard deviations (except for the Anglophones) with unusually low means (except for 7f among the Anglophones), relative to the test as a whole, and even to the acceptably ambiguous sentences in particular (except for the ESL learners);

Table II: Sentences (7f) and (10c): Correct Judgments

Groups	N	Sentence 7f		Sentence 10c	
		X	s	X	s
All	66	.409	.495	.348	.48
Anglophones	11	1	0	.091	.302
All Francophones	55	.291	.458	.4	.494
Franco Trans	24	.25	.442	.292	.464
Franco ESL learners	31	.323	.475	.484	.508

4 - CONCLUSION

We have seen that the results of the grammaticality judgments on some of the sentences in this study appear anomalous, even when the possible effect of ambiguity is considered. It has become clear that ambiguity can be a factor, even when the sentence is ungrammatical on one of its readings. That is, when inherent plausibility or contextual factors push the hearer or reader in the direction of a given interpretation, this reading remains possible, and for some hearers or readers, dominant, despite the ungrammaticality of the sentence on that reading. The lesson which we draw from these results is that grammaticality judgments must be accompanied by interpretations. We advocate that speakers and learners be asked to give paraphrases or translations of the sentence, and then judge the grammaticality of the form of the sentence as an expression of the reading or readings they assign to it. Only then can we hope to know what the speaker- or learner-judge means in saying that a sentence is ambiguous and/or grammatical.

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LANGUAGE TEACHING AND PSYCHOMECHANICS

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In the past, foreign language teaching was not considered by psychomechanics. Psychomechanics wanted to explore the deep structure ("langue") of a language and its connections with the superficial level of linguistic activity known as "discours".

The recent interest in foreign language teaching comes from the development of international relations, and the development of transnational economic ties that lead to the emergence of English as the vehicular language of the world particularly in computer science and computerized networks and activities.

Furthermore, this goes along with a strict demand that workers at any level have a secure knowledge of English, to prevent incidents on machines, particularly computers, and accidents with machines, both due to the misunderstanding of computerized instructions.

Confronting psychomechanics to the didactics of foreign languages leads us to three main ideas.

1- THE IMPORTANCE OF "LANGUE"

To possess spoken discourse forms properly, one needs to consider and dominate the abstract processes and operations that take place in the deepest layers of language.

I would like to discuss the English present perfect in contrast with the French 'passé composé'.

In French the 'passé composé' has two values. The main value is to look back at past finished activities from a present point of vision. It is purely retrospective.

Paul a chanté hier.

In fact this value is derived from the second: the present balance of past activities: what I have acquired in the past and still have in store. A retrospective movement that is brought back to the present.

Paul a vu ce film trois fois depuis un an.

In English the present perfect also has two values.

First the same as the second in French: the present balance of past activities.

I have seen this film three times last year.

I have seen this film three times since 1990.

But it has another value which is particularly amplified with the "median" aspect (progressive form): a past activity that still goes on in the present. A retrospective movement that goes to the expressed or unexpressed beginning of an action in the past and this movement goes back up to the present along with the action.

He has lived here for two years now.

He has lived here since 1990.

He has been living here for two years.

He has been living here since 1990.

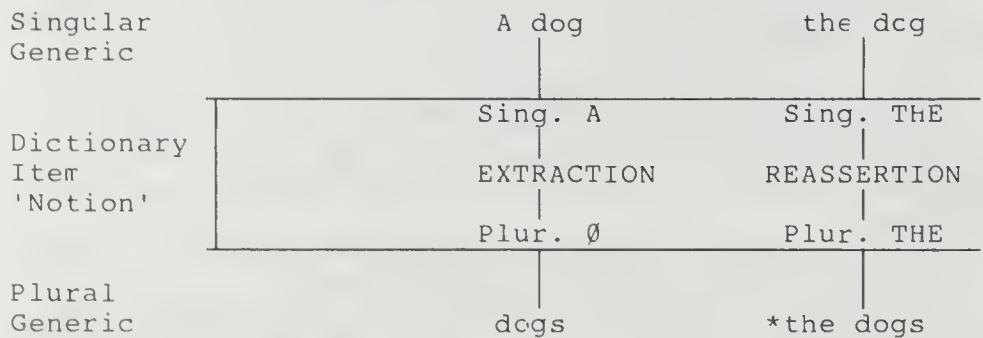
To properly possess this 'tense', one needs to know that the first value of the 'passé composé' is conveyed by the simple past in English, and that the second value of the present perfect is conveyed by the 'présent' in French.

There is no possibility to dominate these facts in discourse if one does not possess the operations in deep language.

2- REWRITING MODELS

Didactics forces the linguist to rewrite his models and his visual representations in agreement with the concrete presentations he is giving the students.

Here I advocate the rewriting of the famous 'tenseur binaire radical' of the article (indefinite and definite) as follows to visualise the operations at work and the generic determination of nouns. In English:



The dogs cannot have a generic value except in very particular situations where 'the dogs' means all the dogs we have spoken of: it is a false generic.

This didactic objective leads to serious questions on the value of the aforesaid psychomechanical model. To teach a foreign language is to produce visual models that enable us to contrast the primary language of the student and the foreign language. The proposed model enables us to see that in English it is 'the dogs' that

cannot be generic, whereas in French it is 'des chiens' that can't.

This leads to the idea that all models or theories are the result of a practical point of view that dictates the form and objective of the theorized knowledge used in that situation. Here, the didactic practical point of view tells us to change the visual model, though we can keep the entire theory that lies behind, practically unchanged.

3-A SOCIAL PROGRAM

Foreign language teaching is an enormous program of activities that are socially, economically and politically initiated.

Linguistics must answer this "supply and demand" situation. We must accept to train the youth at all school levels and adults in all institutions and places, be it some kind of "Open University", "further education", or "further training at the workplace". The linguists have that responsibility. And we need an ever wider answer to the demand for secure knowledge in foreign languages.

Here psychomechanics is essential because it is one of the rare linguistic theories that articulate the level of 'thought' or 'thinking' onto the level of 'langue' and then to the level of 'discourse'. In fact, psychomechanics states that 'thought' and 'langue' are the two sides of one single activity and process. Psychomechanics is cognitive from the very start. This fact is finally coming to ripeness now. We must drop the idea - which is a reduction - that 'thought' is first and 'langue' second. We must state that the brain is first and that it carries the two activities perfectly simultaneously.

The structure of the brain is in many ways fixed and learning a new language is to by-pass set operations engraved in the brain, in order to engrave new operations somewhere else, but new operations that have to be connected to the old ones for contrastive reasons. This approach represents a new generation and a new approach in psychomechanics.

CONCLUSION

To conclude I will say that in Europe more than anywhere else, the evolution of the economic, social and political situation will transform the relations among languages. It will challenge the linguists with new programs of activities in all kind of fields. The linguists will have to change their models and their theories to suit the new objectives and demands.

This brings forward the concept of practical point of view.

Psychomechanics is already engaged in that process of rewriting its body of representations and theoriza-

tions.

This process is all the easier with psychomechanics as it is a cognitive theory throughout. It just has to prove in practice what it is in theory.

Foreign language teaching is one of the fields where this proof will come from.

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ENGLISH SECOND LANGUAGE ACQUISITION BY
NATIVE SPANISH SPEAKERS: A PHONOLOGICAL
APPROACH

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1. INTRODUCTION

The aim of this study is to find out to what extent, professionals in second language teaching are influenced by their native language in the realization of the L2. We have chosen teachers instead of learners by the influence their pronunciation may have on learners, with the possible transmission of incorrect sounds that may become in part fossilized.

Spanish is the L1 and RP English the L2. The level of language we are to analyse is the phonological level and more specifically the field of vowels. As it is known the Spanish vowel system contains five different phonemes in which sounds and spelling are always the same. This differs highly from a vowel system with twelve different phonemes like RP English which is the variety of English generally used in Spain in teaching English as L2.

2. THEORETICAL CONSIDERATIONS

When we learn a second language one of the elements in the process of acquisition is the influence of the native language. This influence has been minimized by other factors that also occur in the process of learning. One is the ability of learners to use their cognitive abilities in a creative way, in which learning is considered as a progression in a series of transitional stages, and in each stage, according to Selinker (1972) they are in control of a language system that is not equivalent to the L1 or the L2. But even error analysis that plays a central role in this approach is a highly complex matter involving other factors, such as the mother tongue influence, that are not cognitive.

Most of the sceptical positions on transfer have been on other than the "strong version" of transfer and in the traditional contrastive analysis, related with the grammatical level of transfer. Nevertheless a large number of studies and empirical research carried out in the last twenty years support the importance of crosslinguistic influence at all linguistic levels.

It is the phonetic level which is the most generally accepted as having a strong influence on second language learning, as two languages frequently have sounds which are similar, identical or completely different and specific and general predictions are possible in a contrastive analysis. The phonetic influence of the L1 is frequent at the segmental level and can cause phonetic, phonemic and allophonic errors, but also the influence of the suprasegmentals is important.

In this study we assume that language transfer as a dynamic element, together with other sociolinguistic and the personal factors of learners, is very important in the process of acquisition of L2.

3. EXPERIMENTAL STUDY

3.1. Method

The first step was to choose model words for the twelve RP vowels phonemes with different consonant environments. Most of the words chosen, between five and six with every phoneme, were monosyllabic in order to perceive clearly the realization of the vowel.

These words were put into short sentences, most of them were statements and with everyday words. The sentences were given at random and the informants read them without knowing which words or phonemes were the object of the analysis. The informants' realization of the sentences were recorded in the subsequent study.

3.2. Informants

They were English teachers with an average of five years teaching experience and most of them knew another language, French in general. Out of a total of twenty-three, eleven were women and twelve men. They had studied English philology, so their theoretical and practical levels were adequate to the aim of this study.

4. RESULT AND DISCUSSION

To obtain the result the words were grouped according to the vowel phoneme we wanted to analyse and with every word we recorded the different percentages that the various phonemes received

according to their realizations.

Most of the vowels were pronounced correctly or at least within the phonetic area belonging to the quality of each phoneme, but there is a tendency to produce them with a certain Spanish accent, not with the same quality as the Spanish vowels but with an allophonic realization that may be found in their area.

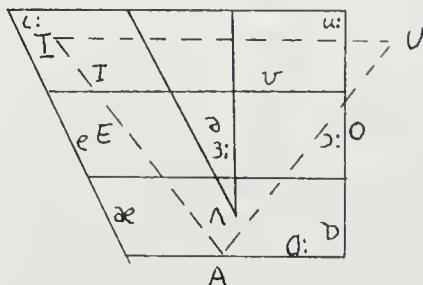
Here are some cases we would like to present: The long vowels /i:, o:, u:/ in 'complete', 'talk', and 'groups' are realized in many cases as /I, ɒ, ʊ/ specially in 'groups' where the pronunciation of /ʊ/ almost doubles the /u:/. In all these cases a reason for this change of quality may be that we do not have long vowels in the Spanish system, and they are easier to identify with the short English vowels even if in these words the shortening may be due to the voiceless consonants following the vowels. This is not the case in 'father' where /ɑ:/ that is followed by a voiced consonant is realized as /ʌ/ by about a 30% of the informants. In this case too, in Spanish the vowel 'a' is better identified with the phoneme /ʌ/ and the velarized pronunciation of the Spanish 'a' is quite unusual.

In the realization of 'sat' and 'many' we have about 50% of pronunciation with each phoneme /æ/ and /ʌ/, this may be due to the spelling form and to the easier identification of the Spanish 'a' to /ʌ/. In 'cough' we have three large percentages of realizations with the phoneme produced as /ɒ/, /ɔ:/ and /ʌ/. With the word 'blood' even if it is predominantly realized as /ʌ/ a large number of informants pronounce it as /ʊ/ and /ɒ/ something probably due to a spelling confusion with the English rules and the Spanish vowel respectively. In 'book' we also have a possible confusion due to the spelling as almost a 35% pronounced it as /ʊ:/ instead of /ʊ/.

It is in the central vowels /ə, ɜ:/ where the Spanish influence is easier to appreciate. These phonemes are unknown in the Spanish vowel system and the centralized pronunciation is highly difficult for Spanish speakers. Here there is a tendency to devoice or obscure a similar Spanish vowel but without completely centralizing it.

The model words of the /ə/ phoneme were chosen taking into account the vowel spelling which matches the five Spanish vowels. The result has been that the realizations of these words were produced with a quality similar to the graphic vowel they have for this phoneme. The graphic vowels 'a', 'e', 'o' were realized as /ʌ, e, ɒ/ respectively and 'i' and 'u' as /ɪ/ and /ʊ/.

According to the data collected we present a diagram with the Spanish and English vowels, the Spanish vowels are in capital letters and the possible interference area of the Spanish vowels are inside circles:



The circles of possible interference of Spanish vowels do not include the central vowels to avoid too many lines in the central area. This is, here in a more complete way, the possible interference of the five Spanish vowels with the corresponding English vowels: 'i': /ɪ, i:/; 'e': /ɪ, e, æ, ə, ɜ:/; 'a': /ʌ, ə, ɒ, ɔ:/; 'o': /ʊ, ɒ, ɔ:/; 'u': /ʊ, u:/.

5. CONCLUSION

The realizations of most of the English vowels were accurate, something predictable if we consider that the informants were professional English teachers. But in general, the English vowels, without loosing their quality, are pronounced in such a way that we may identify with allophonic realizations of the Spanish vowels. In general, a certain Spanish accent is perceived and a tendency to level the English phonemes to areas corresponding to Spanish vowels.

The interference of Spanish is stronger with long vowels and mainly with central vowels. This interference is in some cases provoked by the spelling, especially with the central vowels where the difficulty in producing this sound quality in the Spanish system is substituted by the devoicing realization of the graphic vowels in the words.

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COMPARATIVE LINGUISTICS AND THE TRANSLATION OF AFRICAN FOLKTALES

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1.INTRODUCTION

This paper is concerned with the use of Comparative Linguistics in the translation of African Folktales. After a quick look at Comparative Linguistics and African Folktales, we shall examine the three processes that oral tales go through before they come out as books.

2.COMPARATIVE LINGUISTICS AND TRANSLATION

Comparative Linguistics started in the last half of the present century and has been greatly utilised by both language teachers and translators. It sets out to determine differences and similarities between languages, a knowledge which the translator uses to pass effectively from one language to the other in his work.

3.AFRICAN FOLKTALES IN TRANSLATION

It must be noted that African tales are intrinsically oral and that what we read in books are mere translations from the indigenous languages. We are living in an age of writing and older generations are on their way out. Any cultural ingredient left out from the stream of change is bound to sink some day into oblivion. AS Amadou Hampate Ba once said, "every elder who dies is like a library that is burning" (see Kesteloot 1967:335).

4.THE PROCESS OF COLLECTION

The researcher must go into towns and villages to collect his stories. He must cover as far as possible the areas occupied by the designated cultural group. We had, for example, to do field work in the then Bendel, Anambra and Imo States which are the main Igbo cultural areas of Nigeria. From our research, we produced Stories from our Fathers (Okeh:1980) and Men in our Folktales (Okeh:1986).

5.THE PROCESS OF SELECTION

The rejection or the choice of any collected tale must be based on

sound linguistic and literary principles. The researcher must apply to each story the notion of structure (see Courtés:1976 and Greimas:1970) and watch its aesthetic qualities. Added to the linguistic factors are the socio-cultural ones such as the nature of the protagonistes as well as the social and moral values vehiculated.

6.THE PROCESS OF TRANSLATION

The last and crucial stage is the very act of translating the chosen texts from an African language to French or English.

6.1 Dynamic Equivalence

The problem of translation can be summarized as a problem of equivalence, that is to say, a dynamic equivalence between the original text and the translated text (see Nida 1964 116). Translators of African Folktales achieve this aim when they are guided by the principles and techniques of translation (see Vinay and Darbelnet:1964). These are principally the deceptive cognates, different levels of abstraction in languages, characteristic language features like idioms and proverbs, direct translation made up of loan words, loan translation and liberal translation, as well as indirect translation made up of transpositions of grammatical categories, modulation of points of view, equivalences for fixed expressions and adaptations of nonexistent situations.

6.2 Imperatives of metalinguistics

A translator of African Folktales must above all be very conscious of the imperatives of metalinguistics which Vinay and Darbelnet (1964:259) define as a total of relations uniting social, cultural and psychological facts to language structures. A translation like this: " . . . la tortue est prête à partir. Elle remercie le roi son hôte et lui dit:- Je suis prête à partir, mais ma femme dort toujours avec ta fille..(Ogike 1982:32)" makes nonsense of the whole cultural context. But when Egudu (1973:25) tells us that 'Tortoise took up his cutlass and went into the bush in search of food', he is making us see in the character more than a mere animal of the forest. Similarly, Dadié (1955) retains the Agni name, Kakou Ananze, with the French equivalent - l'Araignée (Spider) while Diop (1961) gives Wolof flavour to his tales with names like Leuk-le-Lièvre (Hare), Golo-le-Singe (Monkey), Mbotte-le-Crapaud (Frog) and Bourr-le-Roi (King). Likewise, Achebe (1958) prefers directly translated Igbo wise sayings to generally accepted equivalent English proverbs or idioms.

6.3 A handling of Igbo Folktales

We want to finish our presentation by a few comments on our works (Okeh:1980, 1986). We made two separate books yet unpublished on Igbo Folktales. One is centered on Animal Protagonists while the other has human stories. Guided by metalinguistics, we maintained the constant blending of the vocabulary of human experiences with enticing animal details. Protagonists like Tortue (Tortoise), Panthère (Leopard), Coccinelle (Beetle) and

Grenouille (Frog) have kept their masculinity in spite of European grammar. Double-barrel names like Ene-the-Antelope, Ijiji-the-Fly and Atulu-the-sheep are frequent. As Igbo does not make use of articles, we added them as they were required in translation. Igbo has no masculine and feminine pronouns. Therefore, we had to make this distinction in French and English.

7.1 CONCLUSION

So ends our presentation on the translation of African Folktales. As we have shown, it follows long processes beginning with field work in the native languages, going through the meticulous work of selection and ending up with the scientific exercise of translation before becoming reading materials for the public.

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**THE CC SCHOOL PROJECT INTERIM REPORT : CAPTIONING ASL
INTO ENGLISH PROVIDES A NOVEL INCIDENT ENGLISH LANGUAGE
LEARNING ENVIRONMENT FOR DEAF CHILDREN**

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CC School is an interactive, personal captioning environment for deaf children that uses their knowledge of American Sign Language (ASL) to improve their English language skills. Each week children translate ASL stories into English captions at a computerized captioning workstation, and are given regular, individualized instructional feedback. This paper presents the rationale for CC School, describes the captioning environment, and presents progress on an ongoing project to evaluate the growth of English language knowledge in deaf children using CC School as part of their regular school curriculum.

1. INTRODUCTION

Krashen (1985) notes that children acquire both first and second language incidentally, without formal instruction, by exposure to "comprehensible input", and by focusing on language meaning rather than its form. Consequently, Krashen argues that language teaching programs must be highly motivating and non-evaluative, engaging children in captivating activities that require them to use language to communicate without being consciously preoccupied with language-learning per se. Consistent with this view, Neuman and Koskinen (1990) recently showed that captioned television, a highly motivating and entertaining form of language input, presents bilingual hearing children with a rich language environment that enables them to learn English words incidentally through context, while they develop certain scientific concepts. Captioned television provided better vocabulary learning than television alone, text alone, or television and text separately presented. Apparently, it was the correlated multisensory "comprehensible input" that mattered in maximizing English vocabulary learning.

One general approach to providing comprehensible English language input to deaf children in an incidental learning environment is to use ASL in bilingual language activities. Many language specialists now propose a bilingual/bicultural approach to English instruction for deaf children and young adults (e.g., Strong, 1988). Recently, Hanson and Padden (1989) used computerized interactive video activities to teach deaf children English in an ASL-English language setting. Their interactive software permitted children to choose among five activities: watching an ASL story; reading an English story; writing answers to questions about a story; writing a story; and captioning an ASL story. Generally, the active options (answering questions, writing a story, and captioning a story) most effectively engaged children's interest. Children were particularly interested in captioning stories. Hanson and Padden note: "The 'Caption a Story' option ... appeared to have genuine potential ... Captioning is potentially more fun than writing a story since students can play back their captions overlayed on ASL segments ... like

watching a captioned movie. This ability to simultaneously display English text and ASL signing takes full advantage of the computer medium, providing a simultaneous display of English and ASL that is not possible in real life."

Mounting evidence suggests that interactive student participation with technology can dramatically improve language and academic skills compared with passive student participation (e.g., Brady, 1990). Video captioning requires interactive participation and provides a captivating way for deaf children to manipulate language and to practice expressive thinking skills. The captioning process is high-tech, challenging, and game-like, with an air of show business. Hence, interactive video technology combined with bilingual language tasks may provide effective incidental English-language instruction for deaf children.

2. CAPTIONING ENVIRONMENT

Three child-friendly workstations were developed by the Media Access and Development Office at WGBH and installed in a computer writing lab at TRIPOD. Each workstation relies on a DOS-compatible PC with a monitor where students display and edit their captioned text. The videotaped material to be captioned is played on a separate color monitor by a VHS VCR with search functions. A video decoder and a separate VHS VCR record the captioned videotape after the child composes and edits the captions. In use, the child controls the videotape with a search wheel, stopping at any point to type appropriate English captions or to review previous video. After editing the captioned text, the child deposits the captions line-by-line onto a copy of the videotaped material by pressing a caption button on the keyboard as the video and text are displayed simultaneously on the color monitor. The child can repeat this process to correct timing mistakes.

During a captioning session, a writing lab aide supervises each child's activities. The amount of help or instruction that the aide provides in this environment can be defined to meet the specific purposes of the captioning experience. For the current CC School research program, the aide limits activities to answering questions about captioning mechanics and providing children with necessary vocabulary help in both ASL and English. In a separate session each week, an English teacher gives each child individualized English language instruction specifically related to their captioning session performance.

3. PILOT EVALUATION PROJECT

Data collection for the first year of a two-year pilot evaluation project is now complete. The goals of this project are (a) to determine the feasibility of integrating CC School into a normal school environment and (b) to establish reliable methods to determine if personal captioning helps improve English language skills in deaf children. Children at TRIPOD are captioning an ASL story into English weekly for 40 weeks over two school years. Simultaneously, they are provided with task-specific instructional feedback each week, and an independent set of 40 writing samples are being collected from each student. These data are being used to develop language measures to track children's improvements in their written captions and their English productions outside the captioning environment.

3.1. Method

3.1.1. Subjects

Subjects are 18 deaf children, 8-12 years old, from the TRIPOD program, a "reverse mainstream environment" where hearing and deaf children are instructed in the same classroom by teachers using both signed and spoken language. All but one of the children were skilled signers when this project started.

3.1.2. Videotaped stimulus materials

Forty highly imaginative allegorical tales were selected from Greek folklore

(Aesop's Fables) and from the Hindu and Buddhist folklore of India (Panchatantra and Jatak Katha). These stories are intrinsically interesting to children, having well defined story lines and satisfying resolutions. Using stories from the same classic genre maintained strong thematic and structural similarities across stimulus materials, thereby controlling their general conceptual and language difficulty. The stories were translated into approximately 1.5 min. ASL segments and recorded on videotape by Mr. Patrick Graybill, a professional deaf actor and story teller with the National Theater of the Deaf, and a native ASL signer.

3.1.3. *Initial language assessment*

ASL skills were assessed at the start of the project by a one-on-one interview procedure. An adult native ASL signer casually conversed with each child, varying his level of language expression until the child seemed comfortable with the communication. The interviewer and another ASL signer rated videotapes of each child's interview for expressive and receptive ASL competence.

English language knowledge was assessed with the Test of Syntactic Abilities (TSA) Screening Test of Quigley, et al. (1978), and the English Language Principles and Parameters Survey (ELPPS) of Berent and Samar (1991). The TSA surveys knowledge of traditional English grammatical structures. The ELPPS surveys knowledge of fundamental principles of universal grammar and English language parameter settings as specified in the Government and Binding (GB) framework of Chomsky (1981).

3.1.4. *Captioning sessions*

Each child works for 45 minutes to caption an ASL story into English. Other than mechanical and vocabulary help, a child is given no help on the syntax or composition of captions, or any other language instruction in this session. Children's requests for vocabulary items during each session are recorded.

3.1.5. *Instructional treatment*

Each child receives instructional feedback in a separate 45 minute session a day or more after captioning that week's ASL story. The instructor prepares for each child's session by reviewing their captioned videotape and comparing the captions to an English translation of the original ASL videotaped story. During the session the instructor reviewes the child's printed captioned text, pointing out syntactic, semantic, and vocabulary errors, and encouraging attention to certain standard structural problems (e.g., inappropriate tenses on verbs, or the absence of obligatory sentential subjects). The child then rewrites the same story.

3.1.6. *Writing samples*

Short non-verbal cartoons and film clips are used to elicit weekly independent writing samples from the children in a separate classroom exercise.

3.2. Results and discussion

The workstations were easily integrated into an existing computer instruction lab. Children and teachers found the two 45-min. CC School periods per week to be a manageable addition to their schedules. By including an instructional component in the captioning routine, children not only receive feedback about their caption writing, but they also receive language instruction that complements other ongoing language activities. A benefit of CC school is that it creates opportunities for novel instructional activities apart from the captioning sessions themselves. For example, teachers found that the weekly writing exercise for this evaluation project reinforced the use of writing principles taught during other classroom activities. Furthermore, written captions and instructional records can be included in children's IEP (Individual Educational Program) documentation

for assessing skills and progress and for planning future educational directions.

The reaction of children, teachers, and parents to the CC school project has been uniformly positive. Children acquired the technical workstation skills quickly and found the ASL stories interesting and capable of holding their attention from week to week. Teachers spontaneously began to use CC School to experiment with their own video materials, and noted the possibility of incorporating specific curricula into captioning exercises. Parents foresaw enticing opportunities for their deaf children to practice English at home by captioning home videos.

Preliminary observations by the educational staff at TRIPOD suggest that the children have improved the fluency, clarity, and accuracy of their writings over the year. These impressions are partly based on the systematic charting of measures like written text length, percent of meaning errors in captions, percent of verb tense errors, and percent of inappropriate or missing sentential subjects.

Objective language analysis procedures are currently being developed to analyze the extensive language production data from the CC School Project, including (a) global psychophysical scaling procedures and (b) direct language use analyses. An initial impression consistent with much previous work is that these deaf children vary enormously in their productive knowledge of the structure of English. A primary goal of this study will be to catalogue linguistically informative error patterns, seeking new quantification procedures for use with deaf children's English language productions. A promising approach is to develop measures of structural knowledge at theoretically fundamental levels of language organization. For example, measures that assess knowledge of the subcategorization properties of lexical items and of the various modules of GB theory may be revealing.

4. CONCLUSIONS

The educational benefits of the CC School approach with young deaf children could be extended to other populations, including younger or older deaf students, deaf adults, and students learning English as a second language. CC School methodology, software, and workstations can be modified for use in almost any individual or group environment. Extension of the methodology could involve stimulus materials like videotaped stories produced by the students themselves or almost any other type of video in English, ASL, or other languages. Future revisions of CC School could have on-line dictionaries and other feedback and could be made more interactive through videodisk technology.

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DIFFICULTÉS D'APPRENTISSAGE DE LA MORPHOLOGIE FRANÇAISE PAR LES ÉTUDIANTS CHINOIS

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0. INTRODUCTION

Les étudiants chinois qui apprennent le français ont beaucoup de difficultés à en maîtriser les règles morphologiques, tant à l'oral qu'à l'écrit. Connus depuis longtemps, ces problèmes n'avaient pas été analysés systématiquement jusqu'ici. Nous en avons fait l'objet de notre étude, qui se présente en sept volets:

- (1) nature des différences morphologiques entre le français et le chinois;
- (2) exposé du cadre théorique de la recherche;
- (3) méthodologie;
- (4) présentation des corpus;
- (5) analyse des données;
- (6) perspectives d'applications pédagogiques;
- (7) conclusion.

Formulons les hypothèses qui nous ont guidé dans notre recherche.

Hypothèse principale

Les difficultés varient en fonction des différences morphologiques entre le français et le chinois.

Sous-hypothèses

- (1) Plus les différences morphologiques sont grandes, plus les difficultés sont considérables;
- (2) Les connaissances en français acquises antérieurement interfèrent pendant les étapes subséquentes de l'apprentissage du français;
- (3) Les difficultés varient en fonction de la compétence linguistique des étudiants en tant que locuteurs natifs: les étudiants plus compétents auront moins de difficultés que les autres;

(4) Les difficultés diffèrent selon les systèmes écrit et oral: elles sont plus importantes à l'écrit qu'à l'oral.

1. DIFFÉRENCES MORPHOLOGIQUES ENTRE LE FRANÇAIS ET LE CHINOIS

Le terme "morphologie" est ici utilisé dans le sens de morphologie flexionnelle (voir Molino, 1985: 30).

1.1. Verbe

Le verbe, qui joue un rôle important dans presque toutes les langues humaines, a souvent une morphologie plus complexe que celle du nom ou de l'adjectif. La comparaison entre le verbe français et le verbe chinois peut être illustrée par le schéma suivant:

Marques morphologiques portées par les verbes

	mode	temps	pers.	radical	dés.
français	oui	oui	oui	oui	oui
chinois	non	non	non	non	non

D'après ce schéma, nous constatons que le verbe chinois est invariable, contrairement au verbe français.

1.2. Nom

La flexion nominale en français possède deux marques morphologiques: le genre et le nombre. La flexion en genre distingue le masculin et le féminin, et la flexion en nombre le singulier et le pluriel (voir Mok 1968). En chinois, la catégorie nominale n'est pas marquée par la flexion; le genre et le nombre sont cependant notés par des moyens syntaxiques (voir Zhang et Xu 1984).

1.3 Adjectif

Les flexions adjectivales en genre et en nombre du français ressemblent beaucoup à celles de la catégorie nominale. Elles respectent les mêmes stratégies morphologiques de changement que le nom (voir Dubois 1965). En chinois, la catégorie adjectivale est invariable au point de vue morphologique (voir Zhang et Xu 1984).

2. EXPOSÉ DU CADRE THÉORIQUE

Notre recherche se fonde sur la théorie de

l'analyse contrastive, qui a pris naissance en 1945. Fries (1945: 9) affirmait: "Les matériaux pédagogiques les plus efficaces sont ceux qui sont basés sur une description scientifique de la langue à apprendre, comparée avec une description parallèle de la langue maternelle de l'apprenant." Cette idée a été développée et popularisée par Lado (1957).

3. MÉTHODOLOGIE

Nous utilisons le modèle de Corder et ses trois étapes (1980): (1) identification des erreurs; (2) description des erreurs; (3) analyse des erreurs. De plus, deux principes nous aident à repérer les erreurs:

(1) un principe quantitatif, selon lequel une forme déviante répétée plusieurs fois ou par plusieurs étudiants est considérée comme une erreur;

(2) un principe contextuel, selon lequel une forme morphologiquement correcte lorsqu'elle est prise isolément, mais incorrecte dans le contexte où elle est utilisée, est considérée comme une erreur. Ex. dans */ilparljèr/ *(Il parle hier), la forme /parl/ (parle) est une erreur.

4. PRÉSENTATION DES CORPUS

Nous avons recueilli trois corpus répondant à des objectifs différents: (1) les enregistrements de quatre étudiants (un fort, deux moyens et un faible) de chaque niveau à l'Université de Beijing (120 minutes); (2) les enregistrements de 13 étudiants de deux sessions différentes au Service à la famille chinoise du Grand-Montréal (420 minutes); (3) les examens finals de chaque session de la première année à la quatrième année à l'Université de Beijing (246 copies, 851 pages de 35.5 cm x 21.5 cm).

5. ANALYSE DES DONNÉES

L'analyse quantitative et l'analyse d'emploi auxquelles nous avons procédé confirment notre hypothèse principale et nos trois premières sous-hypothèses. Notre dernière sous-hypothèse devrait cependant être raffinée. Nous avons trouvé en effet que les débutants, eux, ont plus de difficultés à l'oral qu'à l'écrit, contrairement aux étudiants avancés.

6. PERSPECTIVES D'APPLICATIONS PÉDAGOGIQUES

La conception du yin et du yang comme principe général de classement pourrait aider les étudiants

chinois à comprendre la notion de genre en français; le modèle employé par Séguin (1986) pour classer les verbes français serait meilleur que le modèle traditionnel pour l'apprentissage de la morphologie verbale; en l'absence d'immersion, les exercices intensifs deviennent essentiels pour maîtriser les règles morphologiques.

7. CONCLUSION

Plus les différences morphologiques entre le français et le chinois sont grandes, plus les difficultés d'apprentissage sont considérables. Pourtant, les différences et les erreurs d'interférence de L₁ ne sont proportionnelles que pour les débutants. Les étudiants avancés présentent plus d'erreurs d'interférence de L₂ que de L₁, ce qui signifie que c'est en réalité à la complexité du système morphologique du français de même qu'à l'interférence de la structure morphologique chinoise qu'il faut attribuer les difficultés d'apprentissage de la morphologie française par les étudiants chinois.

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SECTION 11

LA SURVIE DES LANGUES MENACÉES

SURVIVAL AND ENDANGERED LANGUAGES

IS THERE A FUTURE FOR NATIONAL LANGUAGES IN NIGER?

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I French versus the National Languages

There are many advocates, in Niger, for replacing French as the nation's official language by one or another of our national languages. However, many reasons can be opposed to this suggestion, and these can come under three broad headings.

The first reason is that a difficult, expensive and time-consuming re-working of national administrative and educational structures would be necessary, not to mention massive translation of laws, archives, etc., and the re-education of large segments of the population who are not native speakers of the chosen language.

Secondly, the principal function of any language is communication and, this being the case, it is hardly to Niger's advantage to isolate itself from the large linguistic community of French speakers in Africa and beyond. Maintaining French as an official language, as the language of education, of the workplace, of development and promotion will favorise Niger's future international development.

Finally, there is a certain injustice in forcing the population to accept one of Niger's many national languages as the national language, especially as, for many people who have already had to learn French, the new language would be a third language, and it is usually very difficult to function in a third language.

II Democracy and National Languages

As we head towards democracy, what is the future for Niger and its national languages? Although the French language has an important role to play in Niger's

future, especially on the international scene, it actually touches only 10 to 15 % of the population of Niger. One possible solution to this quandary would be to adopt a second national language for interior commerce, possibly a standardized language based on the Haoussa language, which is widely spoken in Niger and Nigeria, as well as in Ghana and somewhat in Cameroon.

This new national language could be developed using the most commonly used forms, terms, and pronunciations from Haoussa, enriched with contributions, both lexical and grammatical, from other national languages or regional dialects. These contributions could also make the new language easier to assimilate for non-native speakers of Haoussa. To further encourage national cohesion, the people of Niger could individually choose a third language to learn from among the national languages of regions not their own in order to increase their understanding of their brothers and sisters in the nation.

LA LOI SUR LA LANGUE EN CATALOGNE

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Le catalan est la langue romane qui s'est développée et se parle toujours dans les régions d'Espagne et de France qu'on appelle aujourd'hui "Països Catalans" (les Pays catalans). En 1659, le Traité des Pyrénées scinde les Pays catalans, dont la partie septentrionale est annexée à la France. En 1717, le décret de Nova Planta, promulgué par le roi d'Espagne Philippe V, abolit toutes les lois et institutions de la partie des Pays Catalans qu'on appelle aujourd'hui la Catalogne. L'usage officiel du catalan est alors interdit. La castillanisation des écoles primaires commence en 1780. Une renaissance culturelle et littéraire en catalan se produit malgré tout dans la seconde moitié du XIXe siècle. Ce mouvement culturel perd de l'ampleur à partir de 1923, avec la dictature du général Primo de Rivera. Ce dernier démissionne en 1930 et le général Berenguer lui succède. Le 14 avril 1931, après des élections municipales, Francesc Macià proclame la République catalane au sein de la Fédération ibérique. Trois jours plus tard, cette république devient la Généralité de Catalogne. Le catalan est déclaré langue officielle de la Catalogne. Puis vient la guerre civile de 1936 à 1939, suivie du franquisme, qui dure jusqu'à la mort du général Franco, en 1975.

Pendant cette période, c'est-à-dire de 1939 à 1975, l'usage du catalan est à peu près interdit en Espagne. Au début, seuls les classiques peuvent être publiés en catalan, et encore, à la condition que l'orthographe soit celle d'avant les normes orthographiques présentées par Pompeu Fabra en 1913. En 1978, l'Espagne se dote d'une nouvelle constitution, qui divise le pays en régions, ou "autonomies". Le gouvernement de l'une d'entre elles, la Catalogne, adopte en 1983 la "Llei de Normalització Lingüística a Catalunya" (loi de normalisation linguistique en Catalogne), qui vise à rendre au catalan sa juste place en Catalogne, sans toutefois brimer la liberté de l'importante minorité hispanophone.

La loi de normalisation linguistique en Catalogne, promulguée le 18 avril 1983, vise principalement l'égalité, en l'espace de quelques années, entre l'usage du catalan et celui du castillan dans le territoire de la Catalogne. Le législateur souligne plus d'une fois l'importance de la normalisation de l'usage du catalan, ainsi que la garantie de l'usage officiel des deux langues, dans le but d'éradiquer toute discrimination fondée sur la langue.

Cette loi s'est inspirée en partie de la loi 101 du Québec. Il existe toutefois des différences importantes entre les deux lois, découlant principalement du fait que la Constitution espagnole établit que le castillan est la langue officielle de l'Espagne, que «tous les Espagnols ont le devoir de connaître et le droit d'utiliser», mais ajoute que «les autres langues espagnoles seront elles aussi officielles dans les communautés autonomes respectives en accord avec leurs Statuts». Le Statut d'Autonomie de la Catalogne, entré en vigueur le 18 décembre 1979, établit, à

l'article 3, que «la langue propre à la Catalogne est le catalan» et que «le catalan est la langue officielle de la Catalogne, à l'instar du castillan, officiel dans toute l'Espagne».

Étant donné le cadre juridique dans lequel elle s'inscrit, la loi de normalisation linguistique n'aurait pas pu déclarer le catalan unique langue officielle. La double officialité du catalan et du castillan permet d'encourager la connaissance et l'usage du catalan tout en respectant la Constitution.

Il existe deux sortes de double officialité : la double officialité formelle et la double officialité réelle. La double officialité formelle est basée sur l'encouragement, de la part du législateur, de l'utilisation simultanée de deux langues. Ce système suppose la division de la société en deux minorités ne connaissant chacune que sa langue. La double officialité réelle est basée sur le libre choix de l'une des deux langues. Elle suppose la connaissance, de la part de la communauté, des deux langues officielles. C'est ce dernier système qui a été adopté en Catalogne.

Dans le préambule de la loi, le législateur affirme d'abord que le catalan est la langue propre à la Catalogne. Il explique ensuite les causes de la situation précaire dans laquelle cette langue se trouvait lors de l'adoption de la loi de normalisation linguistique. Toujours dans le préambule, le législateur donne le cadre juridique dans lequel s'inscrit cette loi et cite les articles de la Constitution espagnole et du Statut d'Autonomie de la Catalogne qui ont rapport à la langue. Il énonce ensuite les objectifs de la loi : encourager l'emploi du catalan par tous les citoyens; rendre effectif l'usage officiel du catalan; normaliser l'usage du catalan dans les média; assurer l'extension de la connaissance du catalan.

Comme le catalan est la langue propre à la Catalogne, tous les citoyens ont le droit de la connaître et de l'utiliser, oralement et par écrit, dans les relations et les actes publics, qu'ils soient officiels ou non. Ils ont aussi le droit de recevoir l'enseignement dans cette langue. Les deux langues officielles de la Catalogne sont juridiquement égales. Les citoyens peuvent s'adresser aux tribunaux et aux organismes exerçant des fonctions judiciaires dans la langue officielle de leur choix. Ils peuvent aussi s'adresser aux tribunaux pour obtenir la protection judiciaire du droit d'employer leur langue.

Les lois et autres textes officiels sont publiés simultanément dans les deux langues officielles. La loi dit aussi qu'en cas d'interprétation douteuse le texte catalan sera considéré comme étant l'authentique, mais cette disposition a été déclarée inconstitutionnelle en 1986.

Tout citoyen peut communiquer avec l'Administration dans l'une ou l'autre des deux langues officielles. L'Administration doit répondre dans la même langue et remettre le cas échéant les documents demandés dans la langue officielle choisie par la personne. Les copies destinées à l'extérieur de la Catalogne doivent être rédigées en castillan (le décret 107, du 13 mars 1987, permet aussi l'usage, le cas échéant, de l'autre langue officielle de l'administration réceptrice). Les employés d'organismes à caractère public qui traitent directement avec le public doivent connaître le catalan assez bien pour offrir un service normal dans cette langue. La Généralité doit garantir l'enseignement du catalan à tous ses fonctionnaires. Elle doit aussi promouvoir la normalisation de l'usage du catalan dans des secteurs administratifs qui ne relèvent pas de sa compétence. La connaissance des deux langues officielles est nécessaire pour obtenir le certificat de fin d'études de l'École d'administration publique de la Généralité.

Le catalan est la langue de l'enseignement, à tous les niveaux. Les enfants ont le droit de recevoir le premier enseignement dans leur langue, soit en catalan ou en castillan. Ces deux langues sont des matières obligatoires à tous les niveaux de l'enseignement non universitaire, de façon à ce que tous les enfants puissent les parler couramment à la fin des études primaires. L'élève doit d'ailleurs avoir du catalan et du castillan une connaissance suffisante pour obtenir le certificat de fin

d'études primaires, sauf s'il a fait une partie de ses études à l'extérieur de la Catalogne. L'Administration doit prendre les mesures nécessaires pour que le catalan soit employé progressivement à mesure que les élèves le dominent. Dans les universités, les professeurs et les étudiants peuvent s'exprimer, oralement et par écrit, dans la langue officielle de leur choix. Les universités doivent offrir des cours de catalan aux professeurs et étudiants qui ne le comprennent pas. Les professeurs doivent connaître les deux langues officielles. La Généralité doit mettre en place des cours de catalan pour assurer que les professeurs en exercice et les personnes qui se destinent à cette profession connaissent bien les deux langues officielles.

Les centres d'enseignement doivent faire une utilisation normale du catalan dans toutes leurs activités. Les deux langues officielles doivent être enseignées dans les centres de formation permanente ainsi que dans les centres d'enseignement spécialisé qui offrent des cours de langue; quant aux autres, ils doivent offrir des cours de catalan aux élèves qui en ont besoin. La Généralité doit créer ou subventionner des centres destinés à encourager la connaissance, l'utilisation et la promotion du catalan, partout où l'exige la situation sociolinguistique.

La langue employée normalement dans les média doit être le catalan. La Généralité doit y promouvoir la langue et la culture catalanes. Elle doit aussi encourager la normalisation de l'usage du catalan dans les activités commerciales, culturelles, sportives, etc. Tant que la Généralité ne disposera pas de média propres, elle devra prendre des mesures pour garantir l'existence d'au moins une station de radio et une station de télévision en catalan qui couvrent tout le territoire de la Catalogne.

La Généralité peut subventionner les publications périodiques écrites entièrement ou partiellement en catalan tant que dureront les conditions défavorables qui en affectent la production et la diffusion. La Généralité doit encourager la normalisation chez les stations de radio et de télévision. Elle doit aussi encourager toutes les manifestations culturelles publiques en catalan (théâtre, cinéma, doublage et sous-titrage de films, spectacles, etc.) ainsi que la production et la diffusion de livres dans cette langue.

Tous les toponymes de la Catalogne, à l'exception de ceux du val d'Aran, ont pour unique forme officielle celle en catalan. L'affichage public doit s'y conformer.

La Généralité doit établir un plan de conscientisation populaire face à la normalisation de l'usage du catalan et établir une carte sociolinguistique de la Catalogne dans le but d'améliorer l'efficacité de sa politique linguistique.

Les dispositions qui suivent ont trait à l'aranais, un dialecte de l'occitan parlé au val d'Aran. Le val d'Aran est situé en Catalogne, dans les Pyrénées, au nord de la province de Lérida. L'occitan est une langue romane très voisine du catalan parlée dans toute la moitié sud de la France, dans une région du nord de l'Italie et au val d'Aran. Le val d'Aran est le seul endroit où l'occitan est protégé par la loi.

La loi de normalisation linguistique affirme que l'aranais est la langue propre au val d'Aran. Les Aranais ont le droit de la connaître et de l'utiliser dans les relations et les actes publics dans ce territoire. La Généralité doit, conjointement avec les institutions aranaises, prendre les mesures nécessaires pour garantir la connaissance et l'usage normal de l'aranais au val d'Aran et pour en encourager la normalisation. La forme officielle des toponymes du val d'Aran est celle en aranais. La Généralité doit fournir les moyens garantissant l'enseignement et l'usage de l'aranais dans les écoles du val d'Aran et prendre les mesures nécessaires pour que l'aranais y soit utilisé dans les média. Évidemment, toute réglementation sur l'usage linguistique conséquente à cette loi devra tenir compte de l'emploi de l'aranais au val d'Aran.

La période d'adaptation à cette loi est d'au plus deux ans pour l'Administration locale et pour les organismes relevant de la Généralité, et elle sera

établie par des accords dans le cas de l'Administration de l'État en Catalogne. Il y a un délai de deux ans pour l'adaptation de tous les panneaux indicateurs.

Partout dans la loi, on remarque une différence de traitement entre les deux langues. On pourrait se demander à première vue pourquoi certains avantages sont accordés au catalan. Ne serait-il pas plus juste de traiter de façon égale les deux langues officielles? Non, car il ne faut pas oublier que le premier article de la loi établit que le catalan est la langue propre à la Catalogne. D'ailleurs, cette solution, plus juste en apparence, aurait perpétué la situation d'inégalité flagrante qui régnait alors entre le catalan et le castillan. Rappelons que l'usage du catalan avait été pratiquement interdit pendant 40 ans. Le catalan avait perdu énormément de prestige face au castillan. Il fallait par conséquent encourager les catalanophones à utiliser leur langue non seulement à la maison ou entre amis, mais aussi dans toutes les circonstances de la vie quotidienne et même dans leurs relations avec l'Administration. Le fait que le législateur précise à plusieurs reprises que les documents écrits en catalan sont valides est d'ailleurs révélateur de l'attitude d'une partie de la population face à cette langue.

Neuf ans après l'adoption de cette loi et dix-sept ans après la mort du général Franco, les progrès accomplis sont remarquables : 90% des revues et journaux locaux sont en catalan, de même que d'autres de diffusion beaucoup plus importante; deux chaînes de télévision émettent uniquement en catalan, et une chaîne publique de l'État offre quotidiennement quelques heures de programmation dans cette langue; plus de cent stations de radio locales émettent en catalan, de même que plusieurs stations dont le rayonnement est beaucoup plus important; le nombre de livres publiés en catalan a grimpé en flèche, passant de 611 en 1975 à plus de 4 300 en 1989; plus des deux tiers des pièces de théâtre sont en catalan. Et la liste pourrait continuer : lors du recensement de 1986, par exemple, 90,3% des habitants de la Catalogne ont déclaré comprendre le catalan, contre 79,8% en 1981. Le pourcentage correspondant au recensement de 1991 sera probablement plus élevé, à cause notamment de l'enseignement obligatoire du catalan dans les écoles. Les données du recensement ne nous fournissent toutefois aucune indication quant à l'usage du catalan.

Il nous reste à espérer que la situation du catalan en Catalogne continuera de s'améliorer pour en arriver finalement à un équilibre harmonieux entre l'usage du catalan et celui du castillan. Les chiffres sont encourageants; souhaitons que l'équilibre voulu soit bientôt atteint.

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ACTUALITE DU PROBLEME OCCITAN**Michel Berthoumieux****1. PRELIMINAIRES**

Jusqu'à présent, la langue occitane fait l'objet essentiellement d'une approche linguistique descriptive sur le plan phonétique, morphologique, sémantique et historique, grâce aux philologues romanistes qu'étaient Anglade, Bartsch, Grafström, Grandgent, Jeanroy, etc...

Ces travaux ont permis de mieux connaître le cas particulier d'une langue romane dont les nombreux documents écrits au Moyen Age témoignent de l'existence d'une "koiné" utilisée sur un territoire qui englobait l'Occitanie et les Pays Catalans, par une catégorie sociale bien précise qui a développé une littérature à la thématique et à la rhétorique originales et avancées et qui a jeté les bases de la prédominance de l'écrit en Europe dans les sciences et dans le droit.

Ils ont permis de dater les étapes de son évolution : la scission du catalan à partir de Ramon Lull, la situation cruciale de l'occitan depuis 1545. Plus récemment, le Pr J. Séguy⁽¹⁾ et son équipe à Toulouse, ont entrepris un travail systématique de dénombrement et de classification des variables qui permettent d'avoir une vision exhaustive du fonctionnement des divers diasystèmes de cet ensemble linquistique complexe que le Pr J.L. Fossat qualifie de "langue historique à statut nécessairement polynomique".⁽²⁾

2. LA NEUTRALITE DES LINGUISTES

Ce n'est pas un hasard si cette définition du Pr Fossat date de 1986⁽³⁾. Cette langue appelée roman jusqu'au XIII^e siècle, "langue d'oc" à la suite de Dante, a depuis connu les appellations restrictives de limousin, de gascon ou de provençal, les spécialistes la définissant en fonction de leurs centres d'intérêt respectivement littéraire, historiques ou philologiques.

Alors même qu'elle faisait l'objet de recherches et d'un enseignement universitaire, elle était considérée dans les manuels scolaires et dans les dictionnaires français comme une langue morte à l'appellation

contestée. Ignorance significative, mais néanmoins coupable aux yeux de certains : la science peut-elle se cacher derrière la nécessaire neutralité du chercheur objectif dans ce secteur des Sciences humaines ?

3. LE DECALAGE DE LA RECHERCHE

Ce ne sont pas les linguistes qui ont fait émerger la problématique linguistique que pose l'occitan.

Sur les traces d'Honorat et de Mistral, déterminés par un attachement affectif bien dans la ligne du romantisme de leur époque, c'est un instituteur, au début de ce siècle, Louis Alibert, qui, 50 ans après l'instauration de l'Ecole Publique, Laïque et Obligatoire en France, entreprend un dictionnaire et une grammaire de référence de l'occitan⁽⁴⁾, et contribue ainsi à donner à cette langue un statut linguistique que d'autres instituteurs, Perbosc et Estieu, décident d'illustrer par leurs écrits puis en fondant la Société d'Etudes Occitanes, devenue en 1946 l'Institut d'Estudis Occitans.

Les linguistes occitans d'aujourd'hui participent de ce mouvement de récupération linguistique commencé entre les deux guerres.

Tout à fait significative, bien qu'apparemment anecdotique, est l'attaque que subit le Pr P. Bec, linguiste dialectologue, dans la presse occitane des années 70, lorsqu'il explique que le gascon aurait pu être une langue à part entière si les conditions politiques l'avaient permis, les critères linguistiques de différenciation de ce dialecte par rapport aux autres dialectes occitans étant plus nombreux et plus pertinents que ceux qui distinguent le catalan du languedocien.

Le principe de l'unité de l'occitan provoqua chez les occitanistes des réactions passionnées. De son côté, le Pr R. Lafont, après le Pr Camproux, s'adonnait à une tâche d'historien de la Littérature Occitane, puis de l'Occitanie elle-même mais avec un a priori socio-linguistique évident : celui de donner un cadre historique qui la justifie à la norme linguistique évolutive de l'occitan. La Section Linguistique de l'Institut d'Estudis Occitans se préoccupait, de définir une forme d'occitan-standard, défendue par le Pr Teulat (Clermont-Ferrand), susceptible de répondre au standard français, puis l'abandonnait pour prôner plus tard un statut dialectal conforme à l'état de fait actuel.

Ce décalage semble comblé aujourd'hui sur le plan théorique, grâce aux travaux de l'Institut d'Etudes Méridionales de Toulouse qui l'ont amené à énoncer les conclusions suivantes : "le diasystème se constitue à partir d'un système à degré de liberté", ce qui entraîne qu'"une grammaire polylectale se définit en termes de dynamique des populations d'un part, population d'unité de travail, population de séquences travaillées par des opérateurs, d'autre part" (Fossat).

4. L'EQUIPEMENT LINGUISTIQUE

L'étude des rapports de force entre les langues reste à faire. Certaines langues sont menacées par l'expansionnisme des autres, lequel était hier dépendant de l'expansionnisme politique. Ainsi s'explique les suprématies historiques du latin, de l'arabe, du français, de l'anglais... Aujourd'hui il est dépendant de l'impérialisme économique qui prend la forme américaine de l'anglais.

A cela s'ajoute le rêve d'un langue universelle susceptible d'accompagner la mondialisation d'un modèle économique et culturel largement déterminé par la civilisation technologique et l'"american way of life".

La suprématie de l'anglais se manifeste par le monopole de son usage dans de nombreux secteurs technologiques et commerciaux de pointe, et le français lui-même se trouve menacé comme langue internationale.

Cet usage prédominant tient donc à "l'équipement" institutionnel et structurel supérieur dont bénéficie cette langue, si bien qu'on peut établir aujourd'hui une hiérarchie entre les langues en fonction de leur degré d'équipement.

Le développement de l'informatique favorise cet équipement alors que cette technologie est à même de réaliser l'interlinguisme simultané et complet et qu'elle peut rendre obsolète le mythe d'une langue universelle.

D'où la réaction des autres langues qui tentent elles aussi de s'équiper mais l'absence de données scientifiques les rendent, selon les points de vue, dérisoires ou exemplaires. Je ne citerai, à titre d'exemple, que deux situations caractéristiques, celle du français dans le cadre du combat en faveur de la francophonie, celle du catalan, se faisant reconnaître comme l'une des langues officielles d'Europe, au service de l'agressivité économique de la Catalogne qui n'est qu'une des régions autonomes d'Espagne, mais les cas de la Chine et du Vietnam, de l'Albanie et de la Moldavie, etc..., sont également intéressants pour peu que les linguistes ne se satisfassent pas inconsciemment d'une norme linguistique internationale ou de la notion subjective d'aptitude par refus de la notion de droit.

(La notion d'aptitude intrinsèque presuppose l'absence de capacité, donc de volonté populaire à faire vivre la langue, elle n'a jamais été scientifiquement prouvée pour les langues aujourd'hui équipées, la notion de droit reconnaît les rapports de force sociaux et internationaux.)

5. EXISTE-T-IL DES "GENOCIDES" LINGUISTIQUES ?

Je connais mal les cas du copte, du maya, du dalmaise..., mais la situation de l'occitan, considérée d'un point de vue géolinguistique et sociolinguistique me permet d'avancer l'hypothèse que les "génocides"

sont possibles dans la mesure où interviennent dans l'histoire d'une langue les données de son territoire, de son statut national (l'occitan est une des langues officielles d'Espagne, grâce aux 6000 occitanophones du Val d'Aran, ce n'est qu'une "langue régionale" en France) et les notions de rapports de force, d'oppression d'aliénation de collaboration et de justice qu'il convient de faire intervenir dans l'approche des phénomènes de diglossie, de multilinguisme et de dialectalité.

6. FAUT-IL PROMOUVOIR UN DROIT DES LANGUES ?

Il me paraît urgent de donner des critères linguistiques pertinents, nécessairement déterminés par des normes linguistiques telles qu'elles ont pu être définies par l'équipe des linguistes toulousains et des critères socio et géopolitiques et géographiques qu'il convient de préciser afin de définir un cadre juridique éminemment utile pour une définition rationnelle du droit des peuples.

D'un point de vue personnaliste, il me semble que la psycholinguistique, toujours en se basant sur des recherches du type de celles qui ont pu être menées à Toulouse, devrait pouvoir donner des bases scientifiques à une conception plus argumentée, donc meilleure de la notion de liberté d'expression et à la problématique, aujourd'hui encore trop scolaire, des rapports entre langue et pensée.

7. CONCLUSION

Si la linguistique, telle que notre contribution a permis de le poser, se voit ouverts des champs d'investigation décisifs pour l'avenir de l'homme communicant et des relations internationales, elle se doit de définir des urgences.

S'il s'avère que la tâche des spécialistes occitans comme de l'ensemble de la population occitane reste prioritaire pour une analyse responsable (même si elle reste méthodologiquement objective) de sa propre réalité, la situation actuelle de l'occitan, d'un point de vue politique et sociolinguistique, est telle que je lance un appel à la communauté linguistique mondiale pour qu'elle tire partie de son exemplarité comme langue menacée et qu'elle lance une entreprise d'assistance internationale en sa faveur. Cette entreprise commence par la définition de critères scientifiques qui permettent d'établir un droit des langues reconnu internationalement. Les langues menacées sont l'expression, souvent la plus intime, la plus refoulée d'individus menacés dans leur identité, fût-ce parfois inconsciemment. Et pourquoi pas un droit humanitaire d'ingérence ?

8. NOTES

- (1 - Atlas Linguistique de la Gascogne. CNRS 1973)
- (2 - Mélanges de Langue et de Litt. occitanès.CESM-Poitiers 1991)
- (3 - Cf Revue Linguistique Romane 1992 (p.200 à 206) JP CHAMBON sur la situation de l'occitan et du catalan d'ap. Lexicon der Romanischer Linguistik 1991 Tübingen, METRELIN et SCHMITT)
- (4 - Gramatica Occitana - IEO Barcelone 1935
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- 3 - Op. cit.

A MINORITY LANGUAGE IN A NON-AUTONOMOUS REGION

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1. INTRODUCTION

Three linguistic (and communicative) systems coexist in the Alsace area: standard French, standard German and Alsatian dialects. Native speakers are only to be found of the first and the last code. Therefore those persons socialized in standard German are irrelevant for this project because whatever competence in standard German Alsatians have today, it has been acquired by learning German as a second language. People socialized in an Alsatian dialect have acquired mastery of standard French in very much the same way (i.e. as a second language but all Alsatians do indeed have at least some knowledge of French). People socialized in French, however, often have no more than a passive knowledge of Alsatian, if at all.

There may be still some people of the oldest generation who have a triglossic pattern in their language use; yet it is already clear that the younger generations no longer have a diglossic pattern in their language use, for them dialect is no longer an acceptable variety in communication.

2. HISTORICAL DEVELOPMENT

Historically, the Alsatian region was principally a German speaking region. The major part of Alsace was annexed by France in 1648. Yet, despite the few linguistic restraints introduced right away (i.e. official documents had to be drafted in French), there was no systematic language policy during the time of the monarchy.

The revolutionary era has to be considered the real start for the subsequent and definitive frenchification of Alsace.

After the German-French war in 1871, Alsace became part of the newly constituted German Empire and the linguistic situation changed accordingly. The rise of French abruptly came to an end whereas the usage and the prestige of Standard German rose considerably, because of linguistic measures of the German government on the one hand (German became the language of instruction, administration and public life), and an impressive migratory movement on the other. Many Germans from

the inland moved into Alsace and at the same time a substantial number of Alsatians left their homeland for France. All of this contributed to a change of the balance of power and prestige in favor of High German. For the opponents of "annexation" though, French not only remained the language of social prestige but it was also increasingly looked upon as a symbol of opposition to the German rule. It is interesting to note that for those opponents with no mastery of French, it was the Alsatian dialects which gradually assumed this symbol of opposition.

The end of WW I marked another dramatic change in the situation: the French again took possession of Alsace, High German and the Alsation German dialects were ostracized. The French government exercised strong pressure to attain frenchification. Yet, lack of language didactic measures, made it very difficult to acquire a working competence in French. Consequently, linguistic insecurity grew rapidly and Alsatians found themselves in a "schizoglossic" situation, aggravated still by mixed feelings of political allegiance.

Still twenty years later Alsace was once again taken over by the Germans. This time High German was imposed on them and generally it was felt to be the language of the Nazis, of occupation, even of collaboration with the enemy. After the war, the French made sure to foster cautiously negative attitudes grown during occupation. In general, the linguistic policy of the French was more subtle but also much more extreme than ever before. In a sociolinguistically (avant-la-lettre) corroborated campaign, the slogan "c'est chic de parler français" appeared everywhere (in newspapers and magazines, on the walls, in trains and streetcars etc.) and clearly appealed to feelings of social integration and assimilation. The message read, loud and clear, that upward social mobility was possible only for those knowing and using French in as many situations as possible. This campaign was backed by drastic and ruthless language planning measures: High German was banned from the schools completely, allegedly to make up for the retardation caused during the German occupation. The same argument was used to justify a new law on language use in newspapers and magazines: even in the German language publications the sports pages, advertisements and articles for the youth were to be written in French; previously existing official bilingual forms were cancelled etc. Moreover, it was carefully ascertained that in Kindergarten, (a preschool system completely developed at that time), speaking the dialect was not only discouraged but even punished.

The ever increasing immigration from the "intérieur", i.e. the French mainland (5% in 1946, 25% in 1979) and the "extérieur" Algerians, Maroccans, Italians, Turks and Portugese (on the basis of the 1982 census 8% of the population of Alsace is of immigrant origin) gradually ended the linguistic homogeneity of Alsace, first of all in urban areas. Consequently, a situation emerged, making it virtually impossible to function without a sufficient command of the

French language. Gradually the dialect was restricted to private, informal domains and for many, this diglossic situation proved to be an intermediate stage leading to complete frenchification.

3. INVESTIGATION

Language maintenance and shift are caused by a considerable number of factors. Two factors and their variables seem most important. For B. Meeus (737) the first factor deals with the desire of the majority to assimilate the minority (or not). The assimilation process is based on linguistic acculturation, i.e. the process in which the language of the majority is learned and identification with the minority group is weakened.

French administration is famous for its centralization. The systematic language policy of frenchification of the French government after World War II with the absence of a period with pluralism as a goal, the legislative measures, the use of French in administration, jurisdiction, mass media, religion and education, the immigration of civil servants in administration and the educational system, the immigration of labourers, the emphasis on the French language as a condition for social advancement has finally limited the number of role repertoires for the minority language and thus has lead to linguistic acculturation, to the decline in the use of Alsatian.

The second factor (B. Meeus: 737) deals with the minority's desire to become fully assimilated or not and bears regarding the Alsace mainly on attitudes, i.e. – the evaluation of the language, in its function as well as in its use.

It must be said that Alsations as a whole have not clamoured for linguistic and cultural rights. P. Gardner-Chloros (13) states " Political action in favour of the dialect is still tainted with a slight flavour of 'autonomism', which between the two wars was in turn ambivalently related to the German cause in Alsace and thus to Hitlerism. Politicians who wished to stamp out the dialect have played on the Alsatians' passionate desire to be French and consequent desire to assert any claim to Alsatian individuality."

The censuses of Alsace carried out by INSEE show a clear falling off of dialect knowledge according to age. Dialect is not necessarily being transmitted to the youngest generation even in families where both parents claim to speak dialect. For P. Gardner-Chloros (30) This is not only due to the influence of school, which remains a French bastion today. It is also due to the parents' deliberate policy of speaking French to their children even when they themself spoke it poorly.

4. INQUIRY

My own inquiry conducted in the city of Colmar confirms Gardner-Chloros findings. In summer 1990 I interviewed young people of several social classes, in three different types of schools: a classical secondary school, a technical secondary school and a vocational school. The questionnaire is divided

into four parts. The first part accounts for the variables "Alsatian family descent", "social status", "age", "sex", etc; and contains the question "are you able to speak Alsatian?". The following section has 21 questions meant to elicit information on the domains and settings in which and the interlocutors with whom Alsatian is used. In a third section the interviewees are confronted with 25 - partly provocative - statements. On a scale from 1 to 5 they had to indicate whether they agreed complete, partly or not at all with these statements. In so doing I wanted to learn about their attitudes towards Standard German, Standard French and the Alsatian dialect. In the final section the frequency of their contacts with Germany and German language media in Alsace was examined.

Only a few findings can be discussed here, first concerning dialect usage. Interesting of course is, "do you speak Alsatian?" The overall result: 49% yes and 51% no. The variable which proves to yield the most relevant information undoubtedly is the one of Alsatian family descent. Among students whose parents were born in Alsace, the percentage of dialect competence is 65%; it falls to only 2% if at least one of the parents is born outside the Alsace. This finding tends to confirm my view, that societal change after WW II, characterized by important migratory movements, presents the toughest challenge for regional (minority) languages.

A sample of the attitudinal questions demonstrates that there as well the dialect competence is the ultimate distinctive feature. 68% of the non dialect speakers agree with the statement that French is more beautiful than Alsatian, whereas only 33% of dialect speakers share this opinion. The variables sex and social class, on the other hand, have not yielded a relevant distinction as far as this topic is concerned. Finally it is very interesting to note the unanimity as far as the, yet provocative statement speaking French yields a feeling of superiority is concerned. Some 60% of all subjects, regardless of sex, dialect competence and social class appear to firmly disagree with the statement. Since some 30% are undecided, only some 10% agree with this statement.

5. CONCLUSION

In officially monolingual France, minority languages are and always have been discriminated. The language planning measures of the French government entailed the functional and structural loss of Alsatian. This and the minority's desire to become assimilated lead to a loss of function and decline in the use of Alsatian. What happened to the Alsatian dialect can be witnessed in other minority languages in comparable situations as well.

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IS MALTESE AN ENDANGERED LANGUAGE?

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1. INTRODUCTION

The purpose of the present paper is to examine language change in Malta, taking place as a result of bilingualism and language contact. Here, we concentrate on two issues: (i) the sociolinguistic profile of Maltese and English, and (ii) crosslinguistic influence between the two languages.

2. THE SOCIOLINGUISTICS OF MALTESE AND ENGLISH

2.1 Varieties of Maltese

Although the Maltese islands are small in size, linguistic variation is greater than one would expect. Not only do geographical varieties of Maltese differ from each other on all linguistic levels (although mutually intelligible to a large degree), but variation within villages has also been observed.

We would like to point out that all this variation within the Maltese language plays a very significant role in the survival of Maltese as a language. Contrary to what Borg, Alexander (1977:211) predicted, non-urban speech forms are still flourishing and the dialect boundaries of rural Maltese cannot be said to be fast receding. The dialects have certainly not disappeared in one generation!

The most socially prestigious variety of Maltese is, naturally, standard Maltese. It is the native variety for a sizeable group of people concentrated mainly in certain urban areas, but a superposed variety for most of the rest, associated with formal settings. It is also used on the media and taught in schools up to tertiary level.

2.2 Domains of language use

Language use in multilingual societies has often been discussed in terms of linguistic compartmentalization where each language becomes

associated with certain spheres of activity almost to the exclusion of the other (Fishman 1972; Dorian 1981:74). The Maltese context instantiates a different paradigm: speakers either shift from one language to the other and back in the same stretch of discourse, or use either language in the same domain.

Maltese is used in Parliament, at the Law Courts (legally the Maltese text is considered as binding), and in church services and other religious celebrations, as well as in national festivals and many cultural activities. Although most official texts are bilingual written administrative business is conducted in English. However efforts are increasingly made to use Maltese.

Maltese is used extensively on the local broadcasting media, but most films are relayed in English, and Italian T.V. networks are also very popular. Books, newspapers and magazines are published regularly in Maltese, but there is a considerable local production of such materials in English, in addition to foreign importations.

In the domain of education there is no clear policy regarding medium of instruction. It has been observed that both Maltese and English are regularly used in classrooms where Maltese (mixed in various ways with English) is used as a spoken medium, while English is used in writing (Camilleri, 1991). This spoken/written functional distinction between Maltese and English is probably generalizable to most places of work.

In the family domain differences are found correlating with geographical and social factors. Four types of families (A to D below) have been identified (Camilleri, 1992) on the basis of (i) chronological acquisition of language varieties by the children, and (2) their use of Maltese and English at home, implying a claim (based on informed observation) that the language acquired earlier is more frequently used.

- A : 1. Dialect; 2. Standard Maltese; 3. English
- B : 1. Standard Maltese; 2. English
- C : 1. Standard Maltese and English
- D : 1. English; 2. Standard Maltese

3. BILINGUALISM AND CROSSLINGUISTIC INFLUENCE

For Type A speakers dialectal Maltese characteristically serves Low functions and standard Maltese High functions. However English may serve Low, in addition to High functions. For B and C speakers both languages can have Low and High functions. For D speakers, on the other hand, it is possible to find Maltese serving High functions.

This situation of intense language contact has resulted in a nativisation (Kachru, 1992) of the English spoken in Malta, which is influenced by Maltese on all linguistic levels. In fact the designation "Maltese English" in a linguistic sense would not be amiss here. On the other hand, it has also given rise to an ever increasing influence of English on Maltese (Englishisation: Kachru, 1992), not so much on the phonetic and phonological levels as on the grammatical and semantic ones.

A mixed Maltese and English variety also seems to have come into use

(Borg, 1980). On the one hand it is acquiring native speakers (family type C), while on the other hand it seems to be a social variety particularly spoken by tertiary educated young people possibly serving as a model to young parents of family type C. As a social variety it is also used by older people with a certain social background. Code-mixing has been observed to occur both intra-sententially (e.g. unit-initial and tag switching), and intersententially.

4. CONCLUSIONS

i. Maltese is still widely used in all its variation; it is, in fact, more widely employed than before, as it is acquiring more registers and is being modernized, concomitantly with an increased self-awareness of a Maltese identity.

ii. Albeit in different groups of speakers, Maltese (whether dialect or standard) retains a significant/ increasing role in both Low and High functions, including writing. On the other hand, English is still a component of Maltese culture generally.

iii. In general, Maltese speakers of English in Malta (constituting a minority) are stigmatized by speakers of Maltese. But the former also stigmatize the latter group of speakers, especially if their English is perceived to be rather limited. The social pressure exerted by this minority is however probably on the decline.

iv. There is a general impression that more people are using a form of English and this perception is worrisome to parents and promoters of Maltese culture. While it is true that English is increasingly present in motherese, this is a transient phenomenon for both adults and children. Later on in life Mixed Maltese English becomes a social variety conspicuous, but not omnipresent.

v. Although English now exercises a linguistic influence on the Maltese of an ever increasing number of speakers, Maltese colours the English spoken and written in Malta on all linguistic levels.

vi. We conclude that while Maltese becomes increasingly influenced by English, this process is not one leading to the extinction of Maltese, but is really one of evolution. Maltese will be different in thirty, forty or fifty years' time, but people in Malta will still be speaking different varieties of Maltese.

The sociolinguistic context of Malta presents a case of complex language change, but not one of language shift from Maltese to English.

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LE PICARD DU NORD PAS DE CALAIS (FRANCE)

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Le substrat linguistique du Nord Pas de Calais est le picard (sauf les arrondissements de Hazebrouck et Dunkerque de langue flamande). D'agriculture, il est devenu grâce à l'industrialisation des 19^e et 20^e siècles (mines, textile, sidérurgie, etc) industriel et urbain.

1- DESCRIPTION DE LA LANGUE

Nous ne proposons pas une description exhaustive. Nous ne nous appuyons que sur la syntaxe.

1.1 Système de l'article Il est à trois positions.

eun/des: article indéfinie d'extraction Sg/Pl.

ch': article défini de réassertion Sg/Pl de particularisation: l'objet dont on parle.

el': article défini de réassertion Sg/Pl de généralisation: une classe d'objets.

1.2 Le sujet verbal se décompose en deux: un sujet nominal ou pronominal qui ne peut pas être sujet syntaxique direct du verbe; un sujet pronominal intermédiaire qui est le support syntaxique du verbe.

Paul, i lijot. Mi, j'lijos.

1.3. La connection subordonnée. Elle se décompose en deux: un pronom relatif à antécédent et une particule 'que' de subordination avec éventuellement un déictique de liaison.

Ch'tiot de qui que j'parlos.

El' majon à d'où ce que j'allos.

1.4. Le système temporel. Evolution rapide vers un système à deux temps.

parlot: ancien imparfait pour présent et passé
parlerot: ancien conditionnel pour tout le virtuel (futur et conditionnel).

Anne Lefebvre (Le Français de la Région de Lille) ne saisit pas cette langue, s'appuyant sur un parler francisé et ne considérant que la phonétique. Elle s'attache aux formes créolisées les plus proches du français. Nous partons des formes créolisées les plus proches du picard, de la syntaxe et du lexique.

2- LA PRODUCTION CULTURELLE EN PICARD DEPUIS 130 ANS

Nous ne prendrons que quelques exemples.

Jules Mousseron (1868-1943), Poète-Mineur de Denain. Il a publié douze recueils de poésies picardes de 1897 à 1946 (œuvres posthumes) et un important fonds d'œuvres inédites existe. Il faut distinguer trois niveaux de langues qui se mêlent en fonction des situations. Le picard, en fait du rouchi, langue des mineurs entre eux. Le français qui est la langue des ingénieurs, des médecins, du Maire de Denain, etc. Entre les deux un niveau mêlé qui correspond à la tentative des mineurs de parler français quand ils sont confrontés à des francophones: un mot existe pour désigner ce "créole": on dit que le mineur "s'aparle".

Louis Richard (1850-1915) est de langue flamande à l'origine (né à Bruges). Arrivé à Roubaix en 1863, il apprend à la fois le français et le picard. Il crée le Théâtre Louis, théâtre de marionnettes à tringle, en 1869. Au niveau linguistique il ne mélange pas les langues. Les grandes pièces historiques ou civiques sont en français. Les petites pièces comiques, bamboches, reflètent la réalité linguistique de Roubaix: picard pour les personnages populaires, français pour les classes moyennes et un sabir de flamand et français pour un personnage flamand. Le picard concerné est celui de l'industrie textile.

La chanson textile. De nombreuses sociétés basées sur des cabarets écrivent et chantent des chansons. Les chansons militantes traitant du travail et des revendications sont en français, conformément à la position du mouvement syndical qui avec le français vise l'universel. Les chansons de convivialité et de fête sont soit en français, soit en picard, des niveaux de picard variant selon l'auteur, un picard textile bien sûr.

Le picard est la langue de l'émotion, triste ou joyeuse, de l'ouvrier avec d'autres ouvriers à l'usine, dans la rue, à la maison. Le français est la langue des administrations et des classes moyennes. Celles-ci ne parlent jamais le picard, mais généralement le comprennent. Les ouvriers, eux, font l'effort de tenter de parler français dans leurs relations avec les couches moyennes. Le mouvement syndical, surtout sous l'influence des anarchosyndicalistes et des guesdistes, défend le français comme langue d'expression syndicale et politique: promotion culturelle et visée universelle (nationale ou internationale).

Dans les mines, l'ingénieur ne parlait que français et le mineur ne voulait comprendre que le picard. L'ingénieur donnait ses ordres en français au porion, ouvrier devenu chef d'équipe, qui les transmettait aux ouvriers en picard, seule langue acceptée par le mineur dans cette situation de commandement.

La crise industrielle depuis trente ans a détruit cette architecture linguistique et l'éducation longue (jusqu'à 18 ou 20 ans aujourd'hui) a imposé le

français comme norme. Le picard est aujourd'hui repoussé chez les vieux bien sûr. Ou il est forcé à se créoliser: on s'aparle sur une grande échelle. Ou bien, il survit, y compris dans la jeunesse, même maghrébine d'immigration récente, dans la rue, dans certaines entreprises industrielles, et dans les bars de certains quartiers. Parfois en famille. Particulièrement dans un type de registre de conversation visant à faire rire.

3- LA SURVIVANCE

Le picard survit comme une langue substrat. C'est la première langue sociale, parfois familiale, des enfants des couches sociales populaires et des quartiers ou villes populaires: la langue des jeux, de la rue, de l'enfance. Il n'y a pas de différence là entre les enfants d'origine française, polonaise ou maghrébine: au niveau scolaire, ils feront tous les mêmes fautes: des picardismes.

Le picard se survit sous la forme d'une résistance à l'alphabétisation par le maintien de nombreux picardismes dans le français scolaire. Les enseignants primaires et de français, pour beaucoup issus d'ailleurs, imposent la norme dans l'ignorance, le refus ou même le mépris du picard. Le substrat devient culpabilisé et donc un outil de compensation psychologique devant l'aliénation culturelle dans les milieux sociaux populaires. C'est une cause d'échec scolaire.

Depuis une vingtaine d'années, nous assistons à une renaissance de la culture picarde. D'abord par la sauvegarde de traditions: marionnettes à tringle, recueils d'écrits anciens, enregistrement des mémoires, poèmes et contes des anciens. Mais nous assistons aussi à une continuation de l'écriture en picard et de livres sur les traditions culturelles. Des personnes relativement jeunes (35-50 ans) investissent beaucoup d'énergie dans ce travail. D'où même des fêtes, des scirées, des veillées, des festivals de picard, avec des œuvres de création nouvelles.

Dans les arts, le picard trouve une place neuve.

Que ce soit l'exotisme comique avec des spectacles de théâtre qui sont des vitrines déformées de la Région (Paris-Nord de Jacques Bonnaffé) ou que ce soit le développement contemporain de certaines traditions: théâtre de marionnettes comme le Théâtre Louis Richard, ouvert sur la création.

Depuis une dizaine d'années des expériences d'enseignement du picard existent, mais de façon très marginale.

On remarque aussi les difficultés d'utiliser le picard pour les jeunes issus de la Région (sauf en Pas de Calais) et le plaisir ludique des jeunes maghrébins dans leur référence au picard.

CONCLUSION

Le picard ne disparaîtra pas. Il est au pire forcé

de se créoliser, de se franciser. Mais il survit grâce au développement de la résistance.

Mais il est nécessaire d'avoir une politique volontariste pour lui permettre de reprendre du souffle et de l'énergie. Il risque de s'étioler et de s'appauvrir. Il est nécessaire de lui rendre un espace de vie reconnu.

C'est là encore qu'Anne Lefèvre, après tant d'autres, se trompe qui enterre déjà le picard. Elle ne l'a pas trouvé car elle ne l'a pas cherché où il fallait et comme il fallait. Mais il n'empêche qu'il y a besoin de convaincre la classe moyenne actuelle que cette langue et sa culture sont respectables. Ceci est déjà le cas à Amiens ou en Belgique (Tournai, Mons). Dans le Nord, le picard apparaît comme une langue ouvrière. A Amiens, à Tournai ou à Mons, c'est une langue et une culture reconnues comme citables, par la classe moyenne locale.

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Language Death in Japan

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Linguists are familiar with the present status of Ainu as a language on the verge of extinction, yet other language attrition in Japan has essentially gone unreported. Throughout Japan, ethnically, regionally, and socially distinct varieties of speech have passed into extinction or are rapidly approaching that fate. Besides Ainu, foreign languages once widely spoken on present-day Japanese territory include English (in Ogasawara) and Okinawan. Contact languages, such as Nagasaki Pidgin and Yokohama Pidgin, are now all but extinct. Dialects and sociolects of Japanese, some of notable historical importance, are being abandoned in favor of the national standard.

1. English in Ogasawara

A thousand miles south of Tokyo, one finds a remote archipelago known as Ogasawara. Formerly known as the Bonin Islands and also as Arzobispo, these islands were uninhabited until 1830 when two U.S. citizens, together with a Genovese, an Englishman, a Dansker, and some twenty-five Hawaiians, established the first known settlement (Cholmindeley 1915). In 1853, U.S. envoy Commodore Perry recognized these settlers as the legitimate government of the Bonin Islands. Despite such international recognition, Japan declared its sovereignty and began colonization of the islands in 1862 with an eye toward displacing or assimilating the native Enlish-speaking popoulation.

Despite the hardships of maintaining contact with English-speaking communities in Hawaii and elsewhere, the Bonin Islands enjoyed tranquil bilingual commerce until the events of World War Two led the Japanese government to reconsider its policies vis-à-vis the minority language populations under its control. At that time, Ogasawarans who spoke English were punished. Eventually, nearly 7000 inhabitants were evacuated to Japan's main island, Honshu, which further disrupted the English-speaking community. As such drastic evacuation measures were not taken in other islands under wartime threat, one is inclined to the view that the Japanese government perceived these English-speaking islanders to be a security risk.

After the war, in 1946, 135 Bonin Islanders who could make strong claim to ancestral Bonin Island roots antedating the Japanese colonization were permitted to return to their home, then under U.S. administration. During

the next twenty years, this dwindling population was resuscitated by the U.S. Navy, and the English-speaking community was again flourishing when Japan resumed control of Ogasawara (Sampson 1968).

Since incorporating Ogasawara into the Tokyo prefectural administration twenty years ago, Japan has repatriated many of the ethnic Japanese Ogasawarans who had been displaced during World War Two, but it has discouraged the idea of returning to an era of bilingualism. All children, regardless of their heritage, are taught using Japanese as the sole medium of instruction, no allowances being made for students whose mother tongue is English. In most instances, the English-language services which Tokyo provides foreign tourists are better than those they provide their own citizens in Ogasawara.

2. Ryûkyûan languages

The native speech of the Ryûkyû archipelago, which stretches from southern Kyushu to Taiwan, can (depending on one's descriptive detail) be divided into almost as many varieties as there are islands. The archipelago is itself comprised of smaller island chains and island groups, and these conform somewhat to the several languages which may be identified under various tests of mutual comprehensibility. Since all of these languages are genetically related (Shibatani 1990), they are often called dialects, either of Okinawan (the largest Ryûkyûan population) or, even more misleadingly, of Japanese (the official language). As in the case of Ogasawara, the policies of the national government have been directly responsible for the attrition of these language communities.

The case of Kuroshima in the Yayeyama island group is illustrative. This small island of pastoralists, is actually a national park, and Japanese from other islands cannot purchase property there. Although this has isolated the adults, it has not saved the children, who are required to leave Kuroshima at age twelve in order to attend junior and senior high school on Ishigakijima, Yayeyama's principal island. The language of the school is standard Japanese, and the teachers, who usually are not natives of Yayeyama, typically disparage nonstandard speech.

The concentration of Kuroshima and other Yayeyama school children on Ishigakijima could conceivably promote a leveled, general Ishigakijima speech pattern throughout the Yayeyama island group; however, this is not happening. Ishigakijima's development as a resort tourist destination, together with the importation of skilled labor from other parts of Japan, continues to put pressure on the Ishigakijima population to use the national language.

An additional factor with linguistic implications has been the change in Yayeyama's trading partners after World War Two. Commercial and passenger boats routinely sailed between Yayeyama and Formosa, which is much closer than the island of Okinawa, but now these shipping lanes are closed by Japanese security forces. Even worse, when the services of a large city, such as Taipei are needed, the people of Kuroshima have taken to routinely flying to Tokyo, a journey of considerable length and expense which in earlier times was only rarely contemplated. Along with similar restructuring in other areas of daily life and commerce, this has destroyed Yayeyama's identity as a middleman in Formosa-Okinawa commerce. Kuroshima, once on the sideline of

thriving international commerce, is now a backwater in a second-choice tourist destination.

3. Japanese Pidgins

History documents the use of trading pidgins in Japan from the sixteenth century until the middle of the twentieth century. The most widespread usage was in Nagasaki and, later, Yokohama. Varieties of Portuguese-based and, later, English-based maritime pidgins were used in both areas. In Yokohama, a Japanese-based pidgin also enjoyed currency.

The history of these pidgins may be divided into four periods: (1) early European contact, (2) the *sakoku* period of self-imposed isolation from 1641 to 1854, (3) the era of modernization ending with World War Two, and (4) the present era of internationalism. During the first period, Portuguese served as a base for pidgin usage in Kyushu, and most Portuguese borrowings into Japanese date from this time. During the *sakoku*, the limited nature of casual foreign contact discouraged pidgin usage; interpretation and translation services were adequate for those merchants who were not sufficiently bilingual. A Dutch-based pidgin seems not to have arisen, and Japanese has only a few nontechnical words borrowed from Dutch (e.g., *biiru* “beer”, *boosu* “boss”). After the re-opening of Japan in 1854, English-based pidgins flourished in both Nagasaki and Yokohama until the wartime disruption of commerce and disparaging of English. The remaining speakers of Yokohama Pidgin English, for example, are all old men who learned the language at embassy compounds during their boyhoods. Modern Japan emphasizes internationalism and makes the study of English mandatory for school children. Postwar trade has been characterized by additional foreign language training for businessmen. The liberalization of travel law under the Nakasone government permitted many more Japanese to travel abroad, further promoting foreign language study.

Modern Japanese give great weight to their language in defining themselves as Japanese (Suzuki 1975). They are relatively comfortable with the idea that they should use other languages when communicating with people from outside their social group. When speaking with Japanese from other regions, the national standard language is used. Nowadays, when encountering foreigners (especially Europeans), communication in English is attempted; at the turn of the century, an English-based pidgin would have been used. In light of evidence that this pattern of language accommodation is an old habit, we might speculate that pidgins may have actually facilitated interregional communication in former times, in the era before there existed a widespread standard language. Maher (1991) has in fact advanced the hypothesis that the Japanese language was originally creolized from a pidgin used in northern Kyushu. Whatever may be the status of such speculation about the origin of the Japanese language, it is clear that the modern Japanese lexicon is filled with borrowings which, in the era before television and tourism, were undoubtedly introduced in the context of pidgin usage.

4. Kyo-kotoba

During the reign of the late Emperor Showa, more than any other time in Japanese history, regional varieties of speech lost ground to a national

standard. To great extent, the national standard of the Japanese language has been defined by certain sociolects of Tokyo speech, the so-called Yamanote dialect, and Japanese from various regions have adopted the prestigious Yamanote pattern in their efforts to avoid ridicule and to improve their socio-economic outlook.

Despite Honshu's widespread loss of dialectal variety, the Kyoto dialect retains a certain vigor. Unlike other Japanese dialects, which are pejoratively referred to as *ben*, the Kyoto dialect is designated by the less value-laden term *kotoba*; hence, *Kyo-kotoba*, the language of Kyoto. Japanese are generally familiar with this dialect, and a number of popular authors have promoted this awareness by writing extensively in this idiom.

Actually, Kyo-kotoba is not a homogeneous speech variety. Several sociolects of the region can be identified, many of which have names. Societal change has blurred historical Nakagyo-kotoba, Shôka-kotoba, and Shokunin-kotoba into a general middle class pattern. On the other hand, Hanamachi-kotoba¹, the language of the Maiko and Geiko hostesses, and Gosho-kotoba, the language of the imperial court, have continued their independent development down to the present day. The social associations of Hanamachi-kotoba and Gosho-kotoba have contributed to the general Japanese tendency to consider speakers of Kyo-kotoba charming, gentle, and elegant.

Changes in Japan's child labor law since the end of World War Two, together with more recent changes in societal views of women and their role in urban Japanese society, have made it increasingly less likely that young girls will become Maiko and Geiko. This disruption of the traditional training regimen has disrupted the learning and use of Hanamachi-kotoba (Kimura 1983). Even more dramatic has been the decline of the system of gestural communication used by the Maiko and Geiko.

Since the imperial pattern will not be adopted for use outside its characteristic contexts, the loss of Hanamachi-kotoba could significantly affect the future of Kyo-kotoba generally, especially in terms of how Kyo-kotoba is perceived by Japanese from other dialect areas. Although most varieties of Kyo-kotoba share the more salient phonetic and phonological features, certain characteristics of verb inflection and register lexis are best illustrated by Hanamachi-kotoba. Despite the decline of this primary model, new models of Kyo-kotoba which incorporate aspects of Hanamachi-kotoba may be emerging in Kyoto's growing leisure class; but such a trend is not yet clear.

5. Notes

1. I thank Osamu Nobuhara for the romanization of this kanji compound.

6. References

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**THE SURVIVAL OF ENDANGERED LANGUAGES IN COLOMBIA:
TWO CASES OF PARTICIPATIVE RESEARCH INTO
LANGUAGE AND CULTURE.**

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1. INTRODUCTION

500 years ago, Colombia, a country with coasts on both the Atlantic and Pacific Oceans, great mineral wealth, and all types of climates from the Amazonian jungle and the Choco tropical rainforest to snowcapped Andean mountain peaks - giving rise to an incredible diversity of flora and fauna, was also the habitat of a great variety of native Indian cultures and languages: the crossroads of the Americas. The arrival of the Spaniards caused irreparable damage and disruption to these communities, but could never eliminate them entirely. So much so that, today, ethnolinguists have classified some 64 different Indian languages (11 families and 7 isolated languages) of all types, as well as 2 creoles (English and Spanish based) spoken by descendants of African slaves. This exceptional linguistic and cultural diversity provides an exceptional opportunity for linguistic analysis and the possibility of formulating new paradigms regard the universality of languages.

Research into the languages and cultures of these societies is also needed by the communities themselves in their attempts to survive in the midst of the majority 'mestizo' Spanish-speaking culture that is itself giving way, very traumatically, to the pressures and structures of what we may generously call 'international consumerist society' and 'sauvage neoliberal capitalism'. Hopefully, the new Colombian constitution of July 4, 1992 declaring Colombia a pluricultural, multilingual society and giving official status to various ethnic group languages will give added status and support to the economic, cultural and educational projects of the Indian and Afro-Colombian communities and their organizations. It is also with this hope in mind that myself and other linguists and educators-including some native Indian linguists - have begun to attempt participative research/ action projects such as the two described in this paper - one on the Colombian Caribbean Islands of Saint Andrews and Providence with the Creole community and the

other with paez and Guambian Indian teachers in southwestern Colombia.

2. HYPOTHESIS AND MAIN OBJECTIVES

As a working hypothesis, we propose that since modern languages are an integral part and expression of living cultures, the survival/ recuperation of endangered languages depends on both the objective and subjective motivations of marginal bilingual communities that speak these languages to maintain or recuperate them as a functional part of communities life.

Research with organized sectors of the community - teachers and their students, community leaders and organizations, church groups, local government officials, women's groups....- is not only a method of aiding the researcher in collecting more, and more accurate, information about language and language use, but also educates the participants and motivates them in terms of linguistic and educational possibilities and planning.

On Saint Andrews and Providence Islands, two main objectives were 1) to determine the functions of Creole, English and Spanish in the native creole community; 2) make a preliminary description of the structure and phonology of the creole in order to stimulate cultural recuperation and give support to the bilingual program being experimented in the primary schools. In Guambia, Cauca, my project began by working with some eighty elementary school teachers in a week-long workshop followed by two months of field work. The main objective was the determination of language use and needs in the school and in the community at large in order to promote, evaluate and, if necessary, restructure the incipient bilingual program, materials development, and teacher training.

3. METHODOLOGY AND RESULTS

The participative research in both cases was centered around structured workshops and fieldwork including linguistic diaries, ethnographic interviews, observations in school and community, and a teachers materials inventory (in Guambia). On Saint Andrews and Providence Islands, besides the traditional Swadesh list interviews with informants, research was carried out with the participation of bilingual teachers and the native community action group (Nacopa) through workshops on language and culture with an exchange of knowledge and information between investigator and community, and at local cultural events. The main sociolinguistic discovery was that, except for some native islanders living in the Spanish-dominated tourist-freeport zone, the creole was the language of community and family life. Islander English with strong influence from Jamaica and the southern United States was still used in the Baptist churches and by older members of the community and it is/was this language that community organizations had been trying to recuperate in areas where it had been replaced by Spanish as the formal language of government, education and commerce. For most island

youth and many of their parents, Spanish, not English, is seen as the prestige language to be learned in the school in order to obtain employment in government agencies. The analysis of the phonology and syntax of the community language (O'Flynn, 1990 and Dittmann 1989) showed it to be an English-based creole with strong influence from Jamaican and Central American English Creoles, and not the 'bad English' that the Islanders supposed it to be. Happily, the teachers on Providence discovered that their language had a structure that they could compare or contrast with Standard English and Spanish. Obviously, this is just a first stage of linguistic analysis, signaling all that is yet to be done on supersegmental phonology, semantics, discourse analysis and collection of oral tradition and cultural elements.

In Guambia, the first two courses on language and pedagogy and sociolinguistics produced information in the form of linguistic diaries in both Indian languages and Spanish, compositions, lesson plans and group discussion. There has been an obvious attempt on the part of these communities to maintain and/or recuperate the use of their languages in the community, home and school. This process has counted on the support of linguists who have supplied these groups with phonetic writing systems and basic literacy materials. However, analysis of ritual and formal school situations showed that, inspite of incipient bilingual programs, Spanish was still generally being treated as the 'first language' of the school. The materials inventory indicated that although there were very creative attempts at producing new material in Nasa Yuwe and Guambian, much research and work is still needed, as well as a complete renovation of methods and materials for teaching Spanish as a second language.

4. CONCLUSIONS

As well as achieving the main objectives proposed, observed and expressed phenomena include: increased motivation and understanding on the part of teachers and other participating community members regarding teaching in their community languages; the discovery that the mother tongue was still being treated as a second language in the schools; and, a consensus regarding the need for teachers to improve skills in both the national and minority group language and to produce new teaching materials and methods.

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LANGUAGE BIRTH: AN ALTERNATIVE TO LANGUAGE DEATH¹

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1. INTRODUCTION

The situation of enclave indigenous peoples with respect to the majority society is characterized by asymmetries of power and development which translate in linguistic terms as absence of literacy and standardization, lack of formal bodies responsible for linguistic elaboration, unidirectional bilingualism and linguistic dependency as depicted in code-switching and borrowing behavior. As evidenced by Poplack's data on the Puerto Rican community in New York city (Poplack: 1980), such bilingual speech phenomena do not necessarily imply a loss in minority language skills or imminent shift, yet in most cases, they are viewed as a prelude to an inevitable shift (Gal: 1979; McConvell: 1988). In many cases, the integrity of the minority language cannot be preserved as competence decreases along with language use (Dorian: 1973, 1981; Mougeon and Béniak: 1989, 1990). In minority groups strongly resisting shift to the majority language, bilingual speech phenomena may be responsible for the development of mixed codes (see Hill and Hill: 1986 on "syncretic" codes), a situation which may ultimately result in the replacement of the "pure" code by its hybrid counterpart². The problem with the development of a linguistic hybrid is that mixed codes are almost universally downgraded as symbols of cultural decay and socioeconomic oppression. Consequently, the development of a mixed language is often matched with attempts to resurrect a former "pure" version of the native language, as evidenced by the Mexicano situation described by Hill and Hill. In the end, the language in its hybridized form may appear unworthy of being maintained. The issue of hybridism versus purism thus appears to be a central one in the fate of minority languages. We will address this problem mainly with respect to enclave indigenous communities although our conclusions may fit other types of linguistic minorities. The questions to be raised are the following: can hybridization be prevented and a purist code maintained? In other words, can code-mixing and massive borrowing be impeded? Is language modernization possible relying solely on the structural and lexical resources of the minority language? This paper wishes to focus on the fact that the pressure of new communicative needs in a context of rapid sociocultural change drives speakers to import massively from the dominant language, thus making the development of a mixed code inevitable. Resisting shift to the majority language, the minority language community cannot fill its expanding communicative needs by adopting a purist stance. As language

death results from a progressive shrinking of domains of usage, the birth of a mixed code stems from the sudden increase in topics to be dealt with in the native language. It will be argued that hybridism is inevitable and, consequently, that appeals to purism are self-defeating and may lead in a direction opposite to the desired effect: directly to language shift.

2. DATA

The data to be reported were gathered in the Native Montagnais speaking community of Betsiamites, some 400 miles northeast of Montreal, on the North Shore of the St-Lawrence. Betsiamites is a village of roughly 2000 Natives hosting only a handful of White residents. The aboriginal language, Montagnais (henceforth M), is a member of the central branch of Algonquian languages. A survey³ recently conducted in the community establishes that M is still the language of everyday interactions (see Drapeau and Oudin: 1992). French (henceforth F), the majority language in Quebec, is the main language of instruction in the community schools but is little used between M speakers outside of that setting. Community members are also exposed to F through the media (with the exception of the community radio station which broadcasts in M) and in encounters with non-M speakers (mostly outside the community). The survey indicates that bilingualism is nearly coextensive with the entire community, monolingual elders forming less than 8% of the total adult population. Moreover, the survey indicates that the community is not undergoing a process of shift to F as M is still the language of primary socialization. Betsiamites speakers may be termed "persistent", that is, they use their language in almost every domain of social activity in the community except when literacy is involved, in which case F is used. In contradistinction to language death situations which result from a progressive shrinking of domains of usage, the Betsiamites situation may be characterized by a sharp increase over the past decades of domains (including topics) in which the native language is used, in a context of rapid sociocultural and economic change.

The adaptation to new topics and domains of M language use results in bilingual discourse phenomena such as borrowing and code-switching. The speech of bilingual speakers is filled with switches to F mostly for the purpose of importing nouns which are transferred along with the F determiner and even F prepositions. The imported clause is not phonologically integrated and the point at which it is inserted depends on the grammar of the host language (thereby satisfying our definition of code-mixing). Some of these transfers involving nouns are done for the purpose of filling lexical gaps while others are gratuitous, replacing existing nouns in the host language.

The quantitative data to be presented are gathered from 3 different speech samples from the author's corpus. Sample (1) is a three-hour hotline in M on the local community radio-station (recorded in 1987) during which a band agent presented a plan for tourism development and discussed it with 18 different community members calling in to voice their opinion. Their age ranged between 24 and 71, the majority being in the 40 to 50 bracket. The total number of words in this sample is 19,418. Sample (2) is a subsample of a series of interviews achieved during the summer of 1991 when a stratified random sample of 24 adults between 18 and 57 were interviewed by M participant-observers. These interviews included a session of free conversation used for this sample. The results for 10 speakers (4 men and 6 women) are available here. The total number of words in this sample is 36,791. The third sample compiles recordings of

sessions of free conversation conducted by a community member in the summer of 1980. The results are compiled for 5 bilingual speakers (3 women and 2 men) aged between 17 and 34 (as of 1980). Total number of words in this sample is 24,069. In total the three samples amount to 13 hours of recording with 35 different speakers.

The total number of noun types and the proportion of noun types in each language was calculated for each sample as shown on Table 1. In every case, the proportion of F noun types is higher than 50%⁴.

Table 1: Analysis of noun types

Sample	Total number	Proportion in F	Proportion in M
Hotline	271	53.5%	46.5%
1991	502	60%	40%
1980	461	61.4%	38.6%

In the hotline sample, the proportion of F noun types reaches 53.5%, a surprisingly high outcome given the tendency by bilingual adults in the community to refrain from bilingual speech phenomena (such as borrowing, code-switching and code-mixing) in formal situations.

In order to assess the extent of speakers' communicative needs, we calculated the proportion of F nouns types for which no existing equivalent is available in M⁵. The results are presented in Table 2. Note that the remaining F types are replacements of available M words. These figures show that the need to borrow for the purpose of vocabulary expansion, while it is not the only motivation for switching, does account for a substantial proportion of switches to F.

Table 2: Proportion of French types with no Montagnais equivalent

Hotline	1991 sample	1980 sample
64% N=93	31.2% N=94	43.8% N=124

When speakers address modern topics, the words of their native language fail to meet their communicative needs, as evidenced by the high proportion of F types with no M equivalent in the hotline sample (in the speech of the band agent, the proportion reaches 76%). In order to avoid borrowing, speakers in this sample should have coined 93 different words. In the other samples, the proportion varies depending on the topics discussed by the speakers.

3. CONCLUSION

It is a well-known fact that in many bilingual enclave indigenous communities today "the strategy of borrowing is the common way to handle cultural innovations" as noted by Hill and Hill (1986: 157) for Mexicano. In this regard, our data underscore the acuteness of the communicative needs that the cultural changes of the past few decades have put on the minority languages of the world. In fact, the need for lexical elaboration is so high in persistent linguistic enclaves of the Fourth World (see Rigsby: 1987 for a discussion of this concept) confronted with the communicative demands of modern life, that there is no way for these communities to cope with this problem without importing massively, overburdened as they are by the sheer number of items to create. Spontaneous coining is further impeded by the absence of literacy and standardization, combined with the lack of formal bodies responsible for linguistic elaboration. In fact, it may be that only a handful of the world's languages today can effectively handle the sweeping breath of cultural innovations of this past century, using their

own linguistic resources. Most others have to borrow. In enclave indigenous minorities, the alternative is either to shift to the majority language or to transfer massively from the majority language, since linguistic purism would compel speakers to remain silent or sharply curtail the range of topics they can deal with in their native language. As massive transfer from the majority language ultimately leads to the development of a linguistic hybrid, one is brought to the conclusion that the path of language maintenance for enclave indigenous peoples leads inevitably to language birth as the only realistic way to eschew language shift and death.

4. NOTES

- (1) The research reported on here was funded by a grant (#410-90-1056) from the Social Sciences and Humanities Research Council of Canada.
- (2) See for example, Muysken (1981) on Media Lengua spoken in Ecuador, Thomason and Kaufman (1988) on Michif in the Canadian Prairies and, finally, my own work on French-Montagnais (1991).
- (3) Conducted in 1991, the survey used a questionnaire of 81 items answered by a random sample of 282 speakers between 18 and 86 years of age.
- (4) As there is no proper typological fit between Montagnais and French, we have not defined a "variable" here in the sense of variationist sociolinguistics.
- (5) Items which may be readily translated by verbs in Montagnais were not included in the count. We have also excluded from the count those cultural borrowings which have been coined in Montagnais by elders but which fluent bilinguals normally do not use. Had we included the latter, the figures would have been even higher.

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LANGUES MENACEES, LE ROUMAN

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Le 28 juin 1940 la Bessarabie et la Bucovine de Nord ont été cédées par la Roumanie à l'Union Soviétique. La cession a été précédée par le pacte Ribbentrop-Molotov suivi de l'ultimatum que l'U.R.S.S. a adressé à la Roumanie.

La Bessarabie, devenue soviétique, s'est vue morcelée de façon barbare: son sud et son nord de même que la Bucovine de Nord en ont été faits cadeaux à l'Ukraine. Le reste de la Bessarabie est inclus dans la structure de la République Socialiste Soviétique de la Moldavie ensemble avec l'ancienne République Socialiste Soviétique Autonome Moldave, nommée encore Transnistria.

Immédiatement après le rapt de la Bessarabie une partie de sa population, les nommés cossus et les propriétaires fonciers de même que les capitalistes ont été déportés en Sibérie, d'où la majorité n'est pas revenue. La langue littéraire des Bessarabiens (le roumain) a été interdite. Toute la littérature roumaine multiséculaire, étant déclarée bourgeoise nationaliste, a été anéantie. On a substitué à la langue roumaine littéraire un mélange de dialectes transnistriens, extrêmement primitifs et pleins de russicismes; l'orthographe y était celle russe. Toutes ces innovations sont dues à l'état des choses qui s'était instauré dans la République autonome moldave (la Transnistrie), constituée en 1924. En 1932 une partie progressiste des intellectuels transnistriens a su obtenir le retour à la langue littéraire roumaine et à la graphie latine. Mais en 1938 ces intellectuels ont été décimés à la suite des dénonciations typiques pour toutes l'Union Sovietique des années 1937-38. Les années d'après-guerre se caractérisent dans la linguistique soviétique par l'épanouissement de la doctrine de N Marr. Celui-ci était considéré par ses adeptes comme un des classiques du marxisme-léninisme. N. Marr affirme qu'il existe des langues de classe (langue bourgeoise, langue proléttaire, etc.), que les langues soient mixtes. Cette théorie a contribué, elle aussi, à l'aggravation de la situation du roumain en Bessarabie, la romanité

de celui-ci étant contestée par certains linguistes ou réduite au minimum.

En 1950 Stalin a critiqué la théorie de N. Marr. Par suite de cette critique à Chisinău a eu lieu en 1951 une conférence des linguistes locaux de concert avec les romanistes de Moscou, Léningrad (Saint Pétersbourg) et Kiev. La romanité de la prétendue langue moldave a été réhabilitée. Mais les romanistes invités et les transnistriens qui exerçaient pouvoir soutenaient toute fois qu'il existait deux langues.

L'éminent romaniste V. Sişmarev dans son exposé à la conférence démontrait le contraire: l'existence d'une seule langue, le roumain.

A la même conférence a pris la parole A. Evdochenko, de ce temps-là boursier de thèse à l'Institut de linguistique de Moscou. Il a démontré que le Dictionnaire russe-moldave, édité en 1948 à Kichinev à l'occasion du 30e anniversaire du pouvoir soviétique, n'était qu'une réédition du Dictionnaire russe-roumain de Španier, contenant toutes les fautes commises par celui-ci. Španier traduisait, par exemple, le mot qui avait le sens instrument de l'ennemi par țap ispășitor (bouc émissaire). Dans la préface du même dictionnaire russe-moldave on affirmait que ceux qui s'orientaient vers la langue roumaine étaient des nationalistes-bourgeois.

Pour cacher en quelque sorte le fait de l'existence d'une seule langue roumaine (et non pas deux), les auteurs du dictionnaire changeaient l'ordre des synonymes. Ainsi le mot russe jivotnoe (animal) était-il traduit par dobitoc, jivină, vită, etc. et seulement à la fin de la série on donnait le mot le plus indiqué animal.

L'absence de la littérature classique se faisait de plus en plus sentie. Privée de sa base littéraire, la langue roumaine en Bessarabie dégradait constamment ne pouvant plus opposer une résistance à la langue russe qui bénéficiait de toute sa littérature classique.

A cette dégradation de la langue a aussi contribué le fait que dans les établissements d'enseignement supérieur et spécial on professait en russe, certains parents envoyoyaient leurs enfants à l'école russe de peur qu'ils ne restent sans études supérieures ou spéciales.

La République nommée Moldave se distinguait des autres républiques fédérées, telles l'Arménie, la Géorgie et même de celles récemment constituées, la Lettonie, la Lituanie et l'Estonie où la langue littéraire s'est conservée.

Le fait que dans la République moldave la langue s'est effilochée s'explique par l'instauration au pouvoir des cadres de la Transnistrie qui jouissaient de la confiance au parti communiste gouverneur. La langue de ces cadres était d'une primitivité inimaginable. Pour cacher cela ils parlaient russe

et tâchaient de russifier la population roumaine. Une russification presque totale s'est affirmée à Tiraspol, ex-capitale de la république autonome, la précédente, ville de Balta, étant depuis longtemps cédée à l'Ukraine de concert avec quelques autres localités.

La conférence mentionnée a pourtant eu un effet quelconque. Certains classiques de la littérature roumaine ont été reconnus, mais seulement ceux qui étaient nés et morts au siècle passé tant en Bessarabie que dans la Moldova d'outre Prut qui a toujours été roumaine. Le fait que la langue de la Moldova a toujours été celle roumaine est confirmé par les mots écrits sur la première page du premier livre imprimé à Iasi, capitale de la Moldova, en 1643: Carte românească...tălmăcītă din limba slovenească pre limba românească.

La littérature restituée aux Roumains de Bessarabie constituait seulement une partie infime de leur littérature classique, parce que outre la Moldavie il existe des écrivains classiques originaires des autres provinces de la Roumanie: la Munténie, l'Olténie, la Transylvanie. Mais infiniment plus riche et plus parfaite est quand même la littérature classique du XXe siècle. Il suffit d'en évoquer quelques noms, le Moldave M. Sadoveanu, auteur de plus d'une centaine de livres, le Munténien I.L. Caragiale, les Transylvaniens G. Coșbuc, L. Reboreanu et beaucoup, beaucoup d'autres (Evdochenco 1989 : 53-70).

Tout ce qu'il y a de plus précieux dans la littérature roumaine du point de vue qualitatif et quantitatif a été créé au XXe siècle. Au siècle précédent le grand poète E. Eminescu a élevé la langue au faîte de la perfection, mais décédé jeune encore nous a laissé seulement un petit volume de poésies. Les œuvres des autres classiques moldaves, décédés au siècle passé, qui nous ont été reconnus à la fin des années 50, n'atteignent pas la perfection de la langue d'Eminescu.

En réalité, les Roumains de la République Moldova sont séparés de ceux de la Roumanie de 90 ans de littérature de la meilleure facture. Ce n'est qu'en ces derniers deux ans et demi qu'on a commencé à éditer quelque chose de la littérature classique qui nous a été interdite. Est-ce qu'on peut rééditer en quelques années ce qu'on a édité durant les 90 années précédentes?

Surtout ont souffert les Roumains du Sud et du Nord de la Bessarabie et ceux de la Bucovine de Nord où l'ukrainisation et la russification ont été beaucoup plus intensives.

Aujourd'hui la situation reste très alarmante aussi dans la République Moldova, où la majorité de la population parle une langue massacrée, appauvrie et comblée de russicismes.

On fait des efforts pour redresser cet état des choses. Il y a des étudiants et des élèves bessarabiens qui font leurs études en Roumanie. Les linguistes et les littéraires bessarabiens collaborent avec leurs collègues de la Roumanie. Dès l'année passée les mass media ont activisé leur travail de propagation des œuvres des classiques roumains.

La garantie de l'amélioration de la situation serait pourtant l'école. On y a besoin d'enseignants perfectionnés et de plus de responsabilité par rapport à ceux qui enseignent les élèves, car dans l'ex-Union les exigences vis-à-vis de ceux-ci étaient réduites au minimum. Ainsi explique-t-on le fait qu'un médecin soviétique, par exemple, émigré en U.S.A. a besoin d'au moins 6 ans pour atteindre le niveau du médecin américain. Une situation analogue s'avère dans tous les domaines.

Le problème particulièrement vif c'est le manque de littérature roumaine classique, étant donné que le degré de connaissance d'une langue est directement proportionnel au volume de littérature de bonne qualité lue en cette langue.

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THE KET AND YUG LANGUAGES: THE STRUGGLE FOR SURVIVAL AND SCHOOL TEACHING

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The Ket and Yug languages were 30 years ago the last remnants of the large Yeniseyan family that is supposed to be connected to Northern Caucasian, Sino-Tibetan and some relict languages of Eurasia (such as Burushaski). In the 18-th century to this family several other languages belonged such as Arin, Asan, Pumkopolsk and other dialects known mainly due to the notes of German scholars working for the Imperial Academy of Sciences of St.Petersburg. As the Academy had accepted Leibnitz's proposal (in his letters to Peter the Great) to make a survey of all the languages of the Russian Empire these scholars contributed to the project collecting data on the Yeniseyan languages of Western Siberia. Their papers were rediscovered and studied by the great specialist in Ket A.Dul'zon in the nineteen sixties. He also established that the earliest hydronyms of the northern part of the Central Asia had been connected to Yeniseyan terms for "a river". Thus the original Pre-Turk population of this area seems to be speakers of old Yeniseyan languages. Yeniseyan borrowings in modern Turk languages of the Central Asia are found. There is enough evidence to suggest that a Yeniseyan substratum language preceded later Turk speech in the Southern Altai and Tuva territories. Thus originally the so called "Yeniseyan" languages were spread on a larger part of the Central Asia to the South of their present distribution. Their number had been diminishing rapidly. Most of them were dead by the middle of the 19th century when the great Finnish scholar Castren gave excellent description of Ket and Yug together with the Kot language. The latter disappeared soon after that. The fullest description of it on the base of Castren's data was made recently by G.Verner.

In 1962 and several years later it was yet possible to write down mythological stories (including that explaining the sins due to which the Yug tribe had been doomed to die) known to the last speakers of

Yug. The language practically disappeared with the death of its last bilingual speakers. When 4 old women who spoke Yug and Russian died there was no linguistic continuation since in the Vorogovo region with the intensive communication in the official language their descendants switched to Russian although they still know some Yug forms.

The Ket language in more Northern areas where speakers are mostly fishers and hunters (often without good command of Russian) has survived and twice has been made an object of school teaching. The first textbook for the elementary schools was published by Karger (who worked in the first-rank Leningrad Institute of the Peoples of the North almost all staff of which perished in Stalin's purges). Karger's handbook appeared just before his arrest and was prohibited very soon. Karger invented a Latin-oriented writing for Ket adding some diacritical subscribed signs for specific phonemes. As all Latin-based alphabets the one introduced by Karger had been banned, but I still found some Kets using it (and the prohibited book by Karger) while studying the language in the early sixties. Especially interesting seem some attempts of educated Kets to use the alphabet or its modifications in writing full stories of one's life. I published with my colleagues an example of this genre written by Peshikh (Ivanov, Toporov, Uspensky 1969). Another long autobiography was written by Tyganova, a gifted Ket woman who had been the main informant of Y. Kreinovich, a brilliant Russian investigator of Siberian languages. As he had continued to work on his comments on the text until he died it remained unpublished but some data from it are included into published works by Kreinovich.

The way a Ket might write his/her autobiography has to do with the extraordinary capacity to produce original texts that we found among the Kets. Usually a Ket person is capable of reciting rapidly a large number of texts of folklore character. To them also some stories based on one's own experience (of hunting, participating in a bear festival and other rites, meeting some spirits or demons etc.) belong. In this way the oral habits of narration prepared Kets of older generations for the story-telling or the story-writing.

At the time when we studied Kets in the sixties the main threat to the language came from the school education. There were no colleges for advanced studies in Ket villages. So to get their education many children (usually after studying for some years in an elementary school where they had been taught in Russian) went to far away places with a predominantly Russian population. In that way not only they lacked any school education in their own language. They were

taken out of their natural linguistic background for the most part of the year. Only at the time of the holidays (especially at summer) was it possible for them to spend time speaking Ket in their own families.

An attempt to change the situation became possible recently. The best specialist in modern Ket Verner (a former student of Dul'zon who as his teacher had been exiled to Siberia being a German from the original German Volga republic) together with a Ket woman Galina Nikolaieva composed an elementary textbook for the beginners. This primer had been printed twice (Verner, Nikolaieva 1991). The book is printed as the property of the government. It is not to be sold. It is distributed free among those who study in the Ket schools. The primer is based on principles accepted in similar textbooks used for other languages of Russia. Russian is used as a metalanguage in a short grammatical sketch added to the book as a supplement at the end of it. The alphabet used in the book is based on the Cyrillic letters to which diacritic signs are added in the way similar to what had been done by Karger (see Verner 1987). What still is seen in the textbook is the degree of the Russian lexical and semantic influences especially in some international words borrowed into Ket through Russian. These words transformed also the phonemic system of the language. For instance, the phoneme [f] that had disappeared in the Yeniseyan dialects that had experienced the change [f]>[h] was reintroduced through the borrowed Russian words with it. In the new primer a whole paragraph is dedicated to this phoneme and to the words that contain it.

Russian words (such as the verb for "love") taking the Ket inflection substituted many original abstract terms and cultural designations (for instance, words for writing) that can be reconstructed for the older periods of the Yeniseyan linguistic prehistory on the base of comparative evidence. Despite the superficial influence of many European and specifically Soviet concepts seen in the last primer the real fundamentals of the Ket life (most of all in the district of Kureika being more geographically isolated) are still connected with the archaic shamanistic beliefs and rites. Although they are not at all reflected neither in the textbook nor in the school-teaching linked to it the Ket shamanism has remained the important source of the original culture that has helped to preserve it and the Ket language. In this as well as in the relative economic self-sufficiency of many Ket local groups one may see the reason why the number of the speakers of Ket has remained approximately at the same level (more than 500-600 people) for the last fifty years. If the recent attempt to revive the language

succeeds the problem of the relation between the archaic shamanistic culture and the modernized society might become crucial for the future development.

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THE SURVIVAL AND DEVELOPMENT OF THE SELKUP DIALECTS

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24 aboriginal nationalities were registered by the census of 1989. They are 2468 in number with the predominance of Selkups (1382 people - 55%) and Khanty (830 people - 38%). The number of Evenks, Escimo and Aleutian people was reduced during the latest period. Other nationalities count only several men.

What we call the Selkup language is in fact some dialects which are built according to the common model and which have rows of regular correspondences (Dulson 1971). Many well-known scientists of Uralic languages tried to give their own view on the variety and the number of Selkup dialects and their territorial distribution (Castren, Lehtisalo 1960; Prokofjev 1935; Hajdú 1968; Katz 1979; Janurik 1985). The results based on different criteria of dialectal groups are well correlated or even coincide.

The investigation done by E. Helimski showed that tracing dialects as far back as 250 years and even farther and comparing them with the modern ones and the data of Castren (100 years earlier) would change neither the whole picture of dialectal division nor the number of specific peculiarities of each dialect. The time of divergency of Selkup dialects is approximately evaluated as one thousand years (Helimski 1935: 53).

The Selkup language territory is usually divided into two great and almost isolated from one another parts: the Northern (Taz-Jenisei/Solkup) and the Southern territories (Tym-Narym-Ket-Ob). The latter is situated on the territory of the Tomsk region.

According to the ethnonimical principle they are presented as č u m ɿ l k u p, ū s e k u m and š ö š k u m. They roughly count 870, 230 and 280 people correspondingly. The number of people of each dialect is defined by the territorial sign, because in reality the native speakers of the dialects are considerably less. They are predominantly middle-aged.

The assimilation of the language is explained by the objective factors, that is by the absence of the written language and teaching in that language, by the disappearance of some settlements and migration of the native population to greater centres and by the change of their traditional occupations. This tendency must lead regularly to the extinction of dialects. But there appeared a new tendency of late of the revival of the language and custom of the aboriginal population of Siberia.

The democratization of our society brought to life an active desire of not numerous peoples of Siberia to preserve the language of their forefathers. Perhaps it is difficult to meet these wishes in full at present, but one can't deny the right to existence from even the smallest nation.

In 1989 the Selkup population of the Tomsk region gathered at their first meeting in the town of Ko]pashevo. The society "KOLTA-KUP" (literally: the man of the Ob) was founded there. The society set the following tasks: restoration of the abolished Selkup village Soviets, revival of their language and culture, the development of their national occupations.

On the initiative of this society district authorities took the decision to

train teachers specially for the work in national schools and for teaching their own language.

In 1990 the laboratory of the languages of aboriginal peoples of Siberian North, which deal with these problems was organized in the Tomsk pedagogical Institute. It is not an easy task. For this purpose it is necessary to create the written language and a set of text-books in different dialects of the Selkup language. But nevertheless the laboratory has its possibilities. During many years the scientists of the Tomsk pedagogical Institute have been busy with the investigation of different aspects of the Selkup language. They formed a unique collective body ready to meet the demands of Selkup population. Primarily it was the scientific school headed by professor Dulson who had been dealing with this problem since the forties. Every year he organized linguistic expeditions to Selkup settlements as the result of which a very rich material had been collected. This material served as the basis for writing text-books for Selkup schools. In 1990 the laboratory workers started to work at the text-book in Ivankenski dialect (the middle Ob dialect or ёкум). Lectures and a practical course were prepared for teaching the Selkup students who study at the Tomsk pedagogical Institute at various faculties. In addition to this the ABC for Selkup children has been already written and now is given the finishing touches and a special book for teachers is being compiled. The latter represents a short phonetic and grammatical outline of the Selkup language, teaching aids to each text and conversational topic, and finally a glossary. In the autumn of 1992 this educational complex will be introduced and used for teaching the Selkup language in the school of the village of Ivankino.

The laboratory got the task to write an educational complex of the same type for the Narym Selkups. The work has already begun. With the creation of educational complexes in each dialect there is a real possibility to avert full assimilation of the Selkup language.

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COMPARATIVE ANALYSIS OF RUSSIAN AND VIETNAMESE CONSONANT SYSTEMS

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Comparative phonetics as a linguistic method of an accent study gives the information on phonetical and phonological differences in two correlating languages and makes it possible to foretell an area and a character of articulational difficulties for foreign, students learning Russian. It gives teachers an excellent basis for the preparation of Russian phonetical exercises.

Experimental analysis has shown the following phonological distinctions between Russian and Vietnamese consonant systems:

First. Vietnamese articulation is generally retracted in comparison to Russian one.

Second. Vietnamese labial articulation is less tense than Russian. At the same time the Vietnamese language possesses various pharyngal and implosive consonant sounds.

Essential differences have been noted in basic approaches to the classification of Vietnamese and Russian consonants as elements of the

integral system.

In Russian phonemic classification the phonologically relevant features are represented by softness / hardness, voicefulness / voicelessness, place and mode of formation. In Vietnamese there is no opposition of the hard consonants to the soft ones except for semivowels. Voicefulness/voicelessness is a complementary feature to the opposition of the occlusive / glottic consonants while in Russian this feature is the basic. The Vietnamese occlusive consonants are distinguished by voicefulness / voicelessness before all sorts of vowels. This prevocalic position of consonant phonemes is considered to be strong. In the final syllabic position the same consonants are always weak because they are characterized by voicelessness.

Interaction between neighbouring consonants is inherent to Russian articulation that makes all sorts of assimilation and dissimilation possible. The distinctive feature of Vietnamese consonant system is that all the consonants are strictly tied to the definite places in a syllable. They either begin the syllable or end it. Consonant clusters are not typical for Vietnamese. However, almost all the consonants except /F/ may be followed by semivowel /W/ to form a combination in the initial syllabic position.

Distinctions between Russian and Vietnamese consonant systems enable us to understand the reason for a number of articulatory errors made by the students learning Russian, that reduce the efficiency of an adequate comprehension and reproduction of the Russian speech.

We think it reasonable to begin the process of articulatory training

with the analysis of Russian consonant system because consonants play the most active part in the Russian phonological system.

It is obvious that necessary correction of pronunciation should be made at the beginning of the teaching process and then, the skills of audition and articulation of the consonants should be developed at all the stages of learning Russian as a foreign language.

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THE FUTURE OF REGIONAL LANGUAGES IN INDONESIA

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1. INTRODUCTION

The purpose of this report is to describe the linguistic situation of multilingual Indonesia, where a national language has for the last 70 years succeeded in unifying socially, politically, and, at present, more linguistically, the formerly colonialised country. While in the beginning most of the people speak only their own separate language, thanks to education and communication, they become more and more bilingual. In fact at present there about 20 million younger monolingual Indonesians who do not speak their parents' language anymore. For the 400 or more regional languages, the attribute declining rather than moribund is more appropriate, as the domination of Bahasa Indonesia the national language is quite evident.

Indonesians are ambivalent to this situation: on the one hand, they cherish their national language, because they are proud of having in the past severed the yoke of colonialism through this language, while on the other, they are reluctant to sacrifice their own mother tongue, whereas in fact competition between the national language and regional languages in all aspects of life is unavoidable.

2. THE HISTORICAL CONTEXT

Before Independence in 1945, the country now known as Indonesia, is not a unified state, but consists of different nations each with its own culture and language or language group. The only bond that joins these ethnic groups is that they are ruled by a single colonial power, the Dutch, for a time the British, and later the Japanese. In 1928 Indonesia nationalists proclaim the desire to unify themselves in one country, as one nation-state, and using one language. Malay, a language that has been used as a lingua franca for centuries, is chosen as the national language and given the name *Bahasa Indonesia* 'the Indonesian language'.

Why Malay, a quantitatively minor language, is chosen as the national language, instead of a major language, like Javanese or Sundanese? Several factors contribute to this decision.

Each of the major languages is confined to a limited region, so they are not widely known. And although speakers of Javanese comprised a great number

among the nationalists, they strongly endorsed the choice of Malay instead of their language, because according to them, dominating the nationalistic movement and the future independent state of Indonesia would be detrimental to the common goal of attaining a unified country. The policy of the colonial power contributes also to this decision: the Dutch government gave no freedom to learn Dutch, even discouraged Indonesians from enrolling in Dutch schools. Another factor prepares the way for Indonesians of various cultural and linguistic background to accept Malay as a national language: Malay regional dialects and Malay-based pidgins and creoles make Malay a not very unfamiliar language for non-Malays. For them standard Malay, as the basis for Bahasa Indonesia, with a centuries-old rich literature, is no less prestigious language than Javanese or Sundanese. After Independence, in the Constitution Bahasa Indonesia is given the status of state language, and the regional languages are recognised as parts of regional cultures, which should be cultivated to maintain the principle of 'unity in diversity'. Although an official policy of bilingualism is never iterated, Indonesians become more and more bilingual: they speak their respective language, while at the same time they use Bahasa Indonesia, at first only as an official language, but subsequently as a scientific, literary, informal, household, and even intimate vehicle of communication, both interethnic and intraethnic.

3. THE SPREAD OF BAHASA INDONESIA

Malay, the basis of bahasa Indonesia, is still used by its native speakers of about 14 million in Sumatra, Kalimantan, and other parts of Indonesia. Due to functional diversification, Malay the regional language and Bahasa Indonesia the national language diverged somewhat. For the Malays, Bahasa Indonesia is one of the dialects of Malay. For the majority of Indonesians who are not Malay, Bahasa Indonesia develops from a "foreign language" to a second language for bilinguals and later, for a growing number of the younger generation of Indonesians, one's own first language.

As stated above, Bahasa Indonesia is given the status of state language, so all formal communications are conducted in this language. It is the language of the law, government, business, commerce, science, education, and the mass media. Illiteracy is eradicated by using this language; the literacy rate of the country has reached 80%. This is the language for interethnic communication, as mobility around the country is very intense. The use of the language is extensified as intermarriage between speakers of different languages is not unusual. And this is where bilingualism and language mixing can be found. The children of this intermarriage often use Bahasa Indonesia, instead of the language of either parent, since early childhood. It is my estimate that 10% of Indonesians are BI-monolinguals. The figure is growing with the spread of education and the rise of urbanisation.

4. THE POSITION OF REGIONAL LANGUAGES

In 1985 I made an analysis of the linguistic data of 1980 national census, and--based on those who finished primary and junior high school--I estimated that the number of Indonesians using Bahasa Indonesia (BI) as the main language is 25% of the population. They can be divided into those who are BI-monolingual

and those bilinguals whose first language is BI (BI-bilinguals). As the details of the 1990 national census, especially with regard to the social indicators, are still being processed, we have to wait for more reliable figures. However, with a population of 184.100.000 in 1992, and population growth rate of 1.98% a year for the last 10 years, I estimate that at present there are 35% of the population whose main language is BI. With another bilingual group whose main language is any of the regional languages and whose second language is BI (RL-bilinguals), estimated at 35% of the population, there are at least 80% of the population who speak BI. That leaves 20% of the population who do not speak BI at all (RL-monolinguals). With 20% RL-monolinguals and 45% RL-bilinguals, there are still 65% of the population who speak any of the regional languages. This figure is expected to diminish for the following reasons.

Compared with BI which develops its written as well as its spoken varieties, the spoken variety of RLs becomes more and more prominent. While there are some radio broadcasts in RL, no newspaper in RL is anywhere published. There are some RL magazines, but with a very limited circulation, long term publication is not to be expected. A study by the National Language Center in 1990 shows that among RL-bilinguals personal letter writing in RLs is still practised. The vitality of RLs is very much evident in traditional and classical arts in RL communities, where the language forms an integral part of them. As in other media, book publishing is not flourishing. Most of the major RLs have in the past been written in their traditional scripts. With the romanization of these languages as an attempt to standardize the colonial educational system at the beginning of this century, less and less people have the willingness to read and write in their traditional scripts.

In many RL communities the competence in using the fine distinctions of language levels and varieties is regarded as the highest linguistic skill, beside using the language for literary and rhetorical purposes. Nowadays for more and more younger speakers, those skills are not felt as essential or useful.

Politically it is not true that there is no national policy to preserve the RLs. In the *Garis-garis Besar Haluan Negara* 'the general directives for the implementation of the Constitution' it is iterated that

"The maintenance of regional languages is carried out within the framework of developing and enriching Bahasa Indonesia and the national culture as one of the expressions of national identity".

To implement it, hundreds of millions of rupiah have been spent to study, write and publish folklores, local histories, literatures, customary laws, grammars, and dictionaries of many RLs. Many of them are not available until the present time. However, bad distribution has prevented these materials to reach wide audience, so the money spent is wasted.

One aspect in the efforts to maintain RLs not specifically iterated in the national policy is the place of RLs in the school curricula. The responsibility of teaching RLs is given to the provincial governments. Due to the scarcity of resources, only 3 or 4 RLs are taught in schools.

5. Conclusion

As a developing country, Indonesia faces the problem of priorities in

planning and development. As practised in many countries, the highest priorities are given to other fields other than culture and education. Even in education priorities are given to implementations on the national scale by promoting sectors which use BI as media, such as literacy, primary education, adult education, and science education. As a result, linguistic domains that can be used to cultivate RLs are not developed. The gain for BI is the loss for RLs.

The threat faced by RLs is not the extinction of the speakers, but inadequate attention paid to their maintenance and cultivation. In addition to that, inconsistencies in the implementation of the national policy are widespread, so that the effects and results of RL projects miss the intended goal.

APPENDIX I *Composition of language speakers*

(rough estimate based on education)

BI-monolinguals	10%
BI-bilinguals	25%
RL-bilinguals	45%
RL-monolinguals	20%

APPENDIX II *Number of speakers of major languages in Indonesia*

population in 1992: 184,100,000

growth rate 1.8% a year

(figures below are rounded)

Major languages

Javanese	61.20 mil.
Sundanese	22.50 mil.
Malay	15.00 mil.
Madurese	7.10 mil.
Minangkabau	3.50 mil.
Toba Batak	2.55 mil.
Balinese	2.55 mil.
Banjarese	1.70 mil.
Buginese	1.60 mil.
Makasarese	1.60 mil.
Acenese	1.10 mil.

Minor languages*

28.15 mil.

(* The number of the minor languages is estimated between 250 and 400, most of them in the eastern part of the country).

N O T E :

Figures presented in the appendices are calculated from the 1990 National Census.

LANGUAGE EDUCATION IN HONG KONG: CANTONESE AS AN ENDANGERED DIALECT

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1. INTRODUCTION

Changes in language education practices are often concomitant with political changes. The wave of British colonialism resulted in the adoption of English language education in many parts of the world, such as India, the Philippines and other South East Asian countries. Even with the nationalistic movements in the earlier half of this century, English continues to dominate in the new nation states as the language of commerce and technology. Anachronistic amongst her Asian neighbours is Hong Kong, still a British colony till 1997, the year when she will revert to the rule of the People's Republic of China under the political title of a Hong Kong Special Administrative Region (SAR). Although the new SAR is not supposed to adopt communist practices for 50 years under the 'one country, two systems' agreement signed in 1984 (Wesley-Smith & Chen 1988:330), many changes have already occurred in Hong Kong in the last decade. Among these changes are subtle shifts in language education practices. How these events will affect the status or corpus of Hong Kong Cantonese is the focus of this paper.

2. THE ROLE OF CANTONESE IN HONG KONG EDUCATION

As a British colony since 1842, Hong Kong has always had equivocal policies towards the respective roles of Chinese (Cantonese) and English. While English is needed for effective colonial government and commercial intercourse, Chinese is the language of everyday communication and popular culture of a population which is 98% Chinese (So 1987:2). Both languages are just as essential to the well-being of a Hong Kong belonger. One is needed to succeed at school and at work and the other is needed to interact with family and friends. What has been pursued thus far is a bilingual policy with various degrees of emphasis on either language adopted by different types of schools at different times (Lam 1988). Traditionally, the English-stream schools have used English as the medium of instruction, with Chinese used only in classes in Chinese studies. On the other hand, in the Chinese-stream schools, Chinese has been used as the language of instruction for all subjects, except English Language and Literature. By Chinese is meant Cantonese pronunciation with the written form being close to that of the standard Chinese language in the People's Republic of China (PRC). Hence, the Hong Kong Chinese can read the written form used in the PRC, but unless they have learnt how to speak Putonghua, the standard pronunciation in the PRC, they cannot communicate orally with a non-Cantonese PRC speaker. (By written form, one is referring to the lexical and syntactic aspects and not the graphic characters, because while the PRC uses simplified characters, Hong Kong retains the classical characters.)

In the last decade, Cantonese as a medium of instruction has also received

greater impetus because it was felt that mother tongue education would be more effective. This movement was largely due to a realization that many Hong Kong students were not coping well enough with English as the medium of instruction. These issues came to a head in a report by a visiting panel of experts publicised in 1982 (Education Department, Hong Kong 1982:25-29). The classroom situation was deteriorating so badly that to achieve any learning at all, it was recommended that students should be taught in Chinese (Cantonese). Putonghua was also recommended as a programme to be publicly financed, though initially as an extra-curricular activity. It must be pointed out however that mother tongue education is merely highly encouraged with incentives such as grants for extra teachers (Education Commission 1984:42-43 & Education Commission 1986:30) but not forced upon schools by legislation.

3. THE ENDANGERED STATUS OF HONG KONG CANTONESE

With the approach of 1997, it is but natural to surmise as to whether this mother tongue instruction can be conveniently reinterpreted to mean Putonghua as the medium of instruction. According to the Basic Law of the Hong Kong SAR, 'the Government of Hong Kong shall, on its own, formulate policies on education, including ... the language of instruction...' (Wesley-Smith & Chen 1988:353). Yet, it would be extremely easy to define the language of instruction as Chinese and for Chinese to be interpreted initially as Putonghua plus Cantonese and later as Putonghua exclusively. If that happens, instead of learning just Cantonese and English, a Hong Kong child will have to learn Putonghua as well, since Putonghua is not normally spoken in a Hong Kong home. What will result has been termed a triglossic situation (So 1987) in which there are three linguistic systems with different domains and functions. I would, however, define it as a bilingual cum bialectal situation with English and Chinese as the two languages and Cantonese and Putonghua as the two dialects.

In any case, outside of the educational arena, it appears inevitable for Cantonese to lose its status as one of the two official languages in Hong Kong, again probably by legislative reinterpretation rather than legislative redefinition. Putonghua, one must always remember, is also Chinese. So if Chinese is an official language in Hong Kong, there is no legal obstacle to bar Putonghua from being legally used in official oral communication. If anyone still has any doubt as to the usefulness of Putonghua in government business as 1997 draws near, one has only to remember the many negotiations with the PRC over the building of the Hong Kong airport and similar Hong Kong futures. Proficiency in Putonghua has increasingly proved to be an asset whether one is a government official, an exchange scholar or a business entrepreneur, as long as one wants to deal with the PRC. Just as proficiency in English has always been seen to offer better academic and career prospects in the past decades, so now in the 1980s and 1990s, there has been increasing interest to learn Putonghua for instrumental purposes. Official and business documents involving the PRC will also require better Chinese writing skills than have normally been expected of a Hong Kong Form 5 graduate. Such expectations tie in well with a likely emphasis on Putonghua because the phrasal structure and syntax of Putonghua is closer to acceptable written forms than Cantonese is.

Another likely area in which Putonghua might be expected to gain ground would be broadcasting. A simple relatively non-aggressive measure would be to introduce broadcasting from Peking in the form of an alternative news channel. The Hong Kong audience already used to CNN and BBC cannot but find it interesting to have another option, especially if these individual news watchers have professional dealings with the PRC in government or commercial business. Good Putonghua films aired on Hong Kong television should also attract an audience. This is because internationally acclaimed PRC films such as 'Yellow Earth' and 'Red Sorghum'

(The Economist 1992:104) have already won the hearts of the Hong Kong audience. Both in government and in mass communication, it is likely that Putonghua and Cantonese will co-exist for some years and Cantonese will lose its official status probably by attrition initially and later by legislative reinterpretation.

With the increasing use of Putonghua in Hong Kong, it is also likely that Hong Kong Cantonese will change not only in status but also in its lexical and phrasal structure in time to come. Phonetic and syntactic changes are far less immediate, as far as the oral form is concerned. (In the written form, however, syntactic changes may occur more rapidly for those users that need to communicate in the written form with the PRC frequently.)

4. THE CASE OF GUANGZHOU CANTONESE

To predict the future, it is always useful to look at similar cases in history. A relevant case for comparison is the variety of Cantonese in Guangzhou (Canton). This has co-existed with Putonghua for the last several decades. Since 1956, it was legislated that Putonghua should be the medium of instruction from the first grade through university (Ramsey 1987:28) for all of China. Although in rural areas, immersion might be less complete, in cities like Guangzhou, the primary medium of instruction has been Putonghua (Ramsey 1987:28). The result is that in public life, Putonghua is used, while at home and on the streets, Cantonese is still predominant (Ramsey 1987:29). One reason why Guangzhou Cantonese did not die is because there is a large enough population that sustains it. For a language under attack from another language, 'the larger and more populous the base the greater the degree of security...' (Wardhaugh 1987:2). Just in Guangzhou alone, the population is 2,810,000 and in the whole of the Guangdong province, there are 59,280,000 people (Zhongguo Ditu 1989:20). Most of this population can speak Cantonese. In the neighbouring province of Guangxi, there is also a sizable Cantonese population.

Although Cantonese in Guangzhou has thrived, it still demonstrates features of synchronic variation resulting from borrowing (Anttila 1972:155) from Putonghua as well as other rural dialects. As an urban centre, it is more open to transitional linguistic influences than rural areas. (See Wardhaugh 1987:7 & Chambers & Trudgill 1980:55 for the importance of urban centres in language change.) In recent years especially, with its avid openness to commercial enterprise and Hong Kong Television, Guangzhou Cantonese speakers, especially the younger generation, now understand and use many Hong Kong Cantonese terms. One characteristic example of synchronic variation is the term for T-shirt. A Guangzhou speaker may use *hohn sāam* (汗衫), *lāp saam* (笠衫) or *T-shirt*. The first term uses the same words as in Putonghua which are pronounced *hàn shān* and the last term is common in Hong Kong where Cantonese speakers often use English words while speaking Cantonese. Another example is the term for 'refrigerator' which has three terms: *bīng sēung* (冰箱), *bīng gwāih* (冰櫃) and *syut gwaih* (雪櫃). The first term has a Putonghua pronunciation, *bīng xiāng*, and the last one is used in Hong Kong. There are also many terms in Guangzhou Cantonese which use the same words in Putonghua, but with Cantonese pronunciation. These referents are referred to by different words in Hong Kong Cantonese. Some examples are:

<u>Putonghua</u>	<u>Guangzhou Cantonese</u>	<u>HK Cantonese</u>	<u>English</u>
fù yìn (複印)	fūk yan	yíng yan (影印)	photocopy
gōng ān (公安)	gūng īn	ging chàh (警察)	police
kōng tiáo (空調)	hūng tiuh	láahng hei (冷氣)	airconditioning
lù xiàng (錄像)	luhk jeuhng	luhk yíng (錄影)	video
shì chǎng (市場)	sí chèuhng	gāai sī (街市)	market
xiū xi (休息)	yāu sīk	fong ga (放假)	holiday

5. THE FUTURE OF HONG KONG CANTONESE

The case of Guangzhou Cantonese suggests the following scenario for Hong Kong Cantonese. With a population of 5,896,100 people (Hong Kong Government 1991:373), which is twice that of Guangzhou, though only one-tenth that of the whole Guangdong province, Cantonese is likely to survive, especially with Guangdong close by. However, like Cantonese in Guangzhou, with the increasing use of Putonghua in government and business as well as possible infiltration through broadcasting, the colloquial lexicon will go through a transitional period of free variation, resulting finally in stylistic differentiation (Anttila 1972:155). The dialect as a whole may achieve functional diglossic differentiation with Putonghua being the formal dialect in public domains and Cantonese the dialect in informal domains. If this stable diglossic situation is achieved (Bratt 1985:13), then Hong Kong Cantonese will continue to thrive, even if it may suffer some loss in official status. Just as it has grown linguistically more colourful through codemixing with English, it will develop similar interactive patterns with Putonghua. And since English will continue to be important as the language of commerce and technology, even if slightly less important as the language of government as it will have to compete with Putonghua in that domain, what may occur will be the three-way interaction between these three linguistic systems.

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NUMERALS AND TYPOLOGY IN MINORITY LANGUAGES OF CHINA

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The Department of Linguistics of the Universidad Autónoma de Madrid (UAM) is conducting a research on the Typology of Numerals. This research embraces 500 languages, pertaining to the possible maximum number of families. A part of this research is included in the framework of the Institute of Studies and Exchange with the Far East, a nonprofit organization connected to several departmental activities, including the regular exchange of scholars and students between the UAM and the University of Foreign Studies at Beijing (P.R. China).

The research on numerals includes the preparation of a typological template, in which several features are considered, such as regularity in numeral formation and classification of peculiarities according to units, tens and hundreds, presence or absence of the name of the zero (0) inside the formulation of large names, chain structure (fusion F, coordination C or juxtaposition Y) and several other parameters. The proposed pattern also offers a basic typological characterization of the language according to the typical features of Subject Verb Object order and the position of the Adjective versus the Substantive. Some diachronical peculiarities regarding the evolution of addition and subtraction have as well been considered.

In this paper the author will expose some results achieved in the domain of languages of China not belonging to the Chinese group of the Sinitic languages. In order to give a broad vision of the scope of the task, three items will be presented: the typological scheme of the languages already studied (i), the presence of an Iranian language with a vigesimal system in Chinese territory (ii), and some observations concerning a characteristic of (at least) Altaic languages: the Oberstufenzählung (iii).

Typological templates

Some Abbreviations:

* indicates an anomalous circumstance, f.i. irregular formation in one column (*vid. salikur*).

A The higher number precedes.

B The lower number precedes.

BA Base of the numeration system.

Remains of a former system
are indicated by means of a

bracketed number in the row
above.

AS Adjective Substantive.

SA Substantive Adjective.

SiAd Adjectival Phrase.

Su Suffix.

Subt Subtraction

U Unit.

Name	Fa	Ba	Subt.	Addition	Multiplication						Complementary Information											
					G	P	FEs	FRe	U	D	C											
					FYV	FYV	F Y V	F Y V	FYV	FYV	FYV	FYV	FYV	FYV	O	MCDU	20	x10	Type	SiAd		
Salikur	IEIr	10	---	---	-	-	0	0	A	---	---	B00	B00	---	-	MCDU	+	+	SOV	AS		
Wux	IEIr	20	---	---	11	-19	21	<				OB0	---	OB0	---	-	MCDU	+	-	SOV	AS	
(class) Chinese	STS1	10	---	---	-	-	0	A	A	---	---	OB0	---	OB0	---	+	MCDU	-	-	SVO	AS	
(modern) Chinese	STS1	10	---	---	-	-	A	A	A	---	---	OB0	---	OB0	---	+	MCDU	-	-	SVO	AS	
Uyghur	Atu	10	{50?}	599	0	0	0	0	A	0	---	---	B00	B00	---	-	MCDU	+	50	SOV	AS	
Kazakh	Atu	10	{50?}		0	0	0	0	A	0	---	---	B00	B00	---	-	MCDU	+	50	SOV	AS	
Salar	Atu	10	{50}		0	0	0	0	A	0	---	---	B00	B00	---	-	MCDU	+	50	SOV	AS	
Tatar	Atu	10	{50}		0	0	0	0	A	0	---	---	B00	B00	---	-	MCDU	+	50	SOV	AS	
Uzbek	Atu	10	{50}		0	0	0	0	A	0	---	---	B00	B00	---	-	MCDU	+	50	SOV	AS	
Kirghiz	Atu	10	{50}		0	0	0	0	A	0	---	---	B00	B00	---	-	MCDU	+	50	SOV	AS	
W. Yugur	Atu	10	{(20)}	<30	0	0	0	0	A	0	---	---	B00	---	OB0	---	-	MCDU	+	20	SOV	AS
Mongol	Amo	10	---	---	0	0	0	0	A	0	---	---	B00	B00	---	-	MCDU	-	90	SOV	AS	
E. Yugur	Amo	10	---	---	-	-	-	-	A	0	---	---	B00	B00	---	-	MCDU	-	90	SOV	AS	
Baonang	Amo	10	---	---	0	0	0	0	A	0	---	---	B00	B00	---	-	MCDU	-	90	SOV	AS	
Dagur	Amo	10	---	---	0	0	0	0	A	0	---	---	B00	B00	---	-	MCDU	-	90	SOV	AS	
(Tu3) Monguor	Amo	10	---	---	0	0	0	0	A	0	---	---	B00	B00	---	-	MCDU	-	90	SOV	AS	
Dong-xiang	Amo	10	---	---	0	0	0	0	A	0	---	---	B00	B00	---	-	MCDU	-	90	SOV	AS	
Oroqen	Amt	10	---	---	0	0	0	0	A	0	---	---	B00	B00	---	-	MCDU	+	90	SOV	AS	
Evenki	Amt	10	---	---	0	0	0	0	A	0	---	---	B00	B00	---	-	MCDU	+	90	SOV	AS	
(Hezhen) Nanaï	Amt	10	---	---	15	x	0	0	A	0	---	---	B00	B00	---	-	MCDU	+	90	SOV	AS	
(Manchu) Sibo	Amt	10	---	---	15	x	0	0	A	0	---	---	B00	B00	---	-	MCDU	+	50	SOV	AS	
Dai	Ktt	10	---	---	0	0	0	0	A	0	---	---	OBO	---	OBO	---	+	MCDU	+	--	SVO	SA
Zhuang	Ktt	10	---	---	0	0	0	0	A	0	---	---	OBO	---	OBO	---	+	MCDU	-	--	SVO	SA
Bouyei	Ktt	10	---	---	0	0	0	0	A	0	---	---	OBO	---	OBO	---	+	MCDU	-	--	SVO	SA
Máonán	Ktk	10	---	---	0	0	0	0	A	0	---	---	OBO	---	OBO	---	+	MCDU	-	--	SVO	SA

Vigesimal numeration in wux

An ample variety of languages is spoken in the autonomous region of Xinjiang, in China. Those languages belong, usually, to the Turkic family of the Altaic group. In the Western part of the region, at the border of the Sovietic Republic of Tadzhikistan, a Indoeuropean language is used. It belongs to the Pamir subgroup of the Iranian group, inside the Indo-iranian family. The *wux* language is spoken in the Autonomous Province of Tǎshkùěrgāntǎjíké and neighbouring zones (Gāo: 1985, 1-2). This minority is called *tajik* by the Chinese, who relate it to the one that

speaks this last language. The *tajik* language is spoken, out of China, in the Soviet Tadzhikistán and Uzbekistan, in Afghanistan and Pakistan, but it must not be confounded with the *wux*. *Wux* and *salikur*, another language of the Iranian family, south-eastern group, are languages different from the *tajik* language, which belongs to the South-Western branch of the Iranian family (Comrie: 1981, 161). Another name for the *wux* is *wahan*, (Russian *vakh*, not to be mistaken for a khanty (ostyak) dialect belonging to the Finno-Ugric branch of the Uralic group called in Russian by this name). The *wux* presented a regular vigesimal pattern, exposed after the variety called in Chinese *wǎhǎn*, name of a valley in the North-East of Afghanistan (Gāo: 1985, 108-109). This dialect serves as an exchange language in the border of China, Afghanistan, Pakistan and the USSR, at the South of the Pamir plateau. It is fragmented in subdialects (Central, Eastern, Western and Northern). The variant to be described is mainly spoken in the Dábùdá village, inside the P.R. of China.

The first decade is formed by:

- | | | | |
|----------|----------|-----------|-----------------|
| 1. ji(u) | 2. bu(i) | 3. tru(i) | 4. tsllı bllı r |
| 5. pandz | 6. ſað | 7. ll b | 8. at |
| 9. nau | 10. ðas | | |

The digits (11) to (20) are formed by juxtaposition of 'ten' and 'unit':

- | | | | |
|---------------|-------------|--------------|----------------------|
| 11. ðas jiu | 12. ðas bui | 13. ðas trui | 14. ðas tsllı bllı r |
| 15. ðas pandz | 16. ðas ſað | 17. ðas ll b | 18. ðas at |
| 19. ðas nau | 20. bist | | |

From twenty on, decades are formed as multiples of twenty, plus ten, in due case:

- | | |
|--|---|
| 20. ji bist (1 × 20) | 30. ji bist e(t) ðas (1 × 20 + 10) |
| 40. bu bist (2 × 20) | 50. bu bist e(t) ðas (2 × 20 + 10) |
| 60. tru bist (3 × 20) | 70. tru bist e(t) ðas (3 × 20 + 10) |
| 80. tsllı bllı r bist (4 × 20) | 90. tsllı bllı r bist e(t) ðas (4 × 20) |
| 100. pandz bist (5 × 20), and also sad | |

The combination of the decades, from (20) on, and the units is achieved by *vinculation*, with the conjunction *et*:

- | | |
|-------------------|----------------------|
| (21) bist et jiu | (22) bist et bui |
| (23) bist et trui | (43) bu bist et trui |

Note that, due to the nature of the vigesimal system, when the decade is not a pure multiple of twenty, the number is expressed by:

pure multiple + *et* + ten + unit (33), so, is "twenty and thirteen".

This observation is utmost needed for the correct typological interpretation, given the possibility of misinterpreting the result as that of a juxtaposed type; actually, it exists coordination, and accordingly to it the construction belongs to those called by *vinculation*.

- | | |
|---------------------------------------|--------------------------|
| (33) ji bist e(t) ðas trui | (58) bu bist e(t) ðas at |
| (95) tsllı bllı r bist e(t) ðas pandz | |

Oberstufenzählung

This term (*overstepcounting* or *overcounting*: *O.*) designates a type of construction not to be confounded with the subtractive one: one number (usually above ten) is

named by the corresponding unit and the following decade. The Altaic languages offer very clear examples (Ehlers: 1983, *PhTF*, *JbO*):

bir yigirmi, in Old Turkish, 11, is, lit., 'one twenty', i.e. 'the first number belonging to the decade that ends in the twenty', instead of 'one ten' expected. **äki yigirmi**, 12, 'two twenty'.....**toquz yigirmi**, 19, 'nine twenty'.

It was believed (Pritsak, *HbO*, 5,1, 1963, p. 40) that this pattern run up to 89, due to the expected ambiguity in the decade from ninety on (Clauson: 1959, 25- 26). Clauson himself believes it to be an argument in favour of a system taking us to a period when the Turks did not count above fifty. Ehlers, however, demonstrated that the system applied also to the tens between 91 and 99:

92, that will become (overcounting) *ékji: yü:z* 'two hundred', being then mistaken for 'two hundreds, 200', allows no such construction. It is replaced by the unit followed by the word *örki*, maybe related to the nominal base *ör*, 'height, high', or the verbal *ör-* 'heighten'. The resulting *ékki örki* is, therefore, free from ambiguity. This pattern is valid for 91-99, 191-199, etc. The system is found in Old Turkish together with the 'regular' constructions *on toquz* (19, ten nine) (Annemarie von Gabain in *PhTF*, I, 32). Kaare Thomsen (*PhTF*, 321) documents O. in the language of the *sary uygur* ("Yellow Uygur"), *pär yïyirma 11* (lit. 'one twenty'); *peşîyirma 15* (lit. 'five twenty'); *pär otus 21* (lit. 'one thirty'). The last numeral proves how old is *otus* for 'thirty', whose modern form is *uçon* (lit. 'three ten'). It seems that this language shows overcounting only up to 29. We have documented O. in Western Yugur, as spoken in the Sunan Yugur Autonomous County in Gansu Province (Chen Zong Zhen *et al.*: 1985, 74-75):

11	birejyirmi (1 20)	12	şigejyirmi (2 20)	13	hygyjyirmi (3 20)
14	diorğiyirmi (4 20)	15	beşeşiyirmi (5 20)	16	ahldejyirmi (6 20)
17	jidejyirmi (7 20)	18	sağışejyirmi (8 20)	19	dohGışejyirmi (9 20)
20	20 jiyirmi and sometimes şigon.				

For 21 - 29 both possibilities exist; the old form for 30, *ohdís*, is used:

21	birohdís (1 30)	22	şigohdís (2 30)	23	hudżohdís (3 30)
24	diorohdís (4 30)	25	beşehohdís (5 30)	26	ahldehohdís (6 30)
27	jidohdís (7 30)	28	sağışohdís (8 30)	29	dohGışohdís (9 30)
30	hudżun ~ hudżon	şigon bir 21	etc.	are used as well, sometimes.	

These data must be put together with those offered by Pritsak (1955), proving that overstepcounting is a characteristic of the Altaic numerals. The examples by Pritsak affect two branches, Turkic, through Yakut *satte uomuttan ikki* "of 70 two," i.e. 62, and Tungusic, through Evenki *d'ürd'äkin umun* "of twenty [d'ürd'ä(n) 'twenty'] one," i.e. 11. O. is not to be misunderstood as subtraction. The last construction is also documented in some dialects of (neo)uygur, for some forms between 20 and 100. Pritsak (*PhTF*, 547) presents it as a continuation of Chagatai Turkish, in Aksu, *ikki käm otuz*, 28 (lit. 'two for thirty'), *ikki käm qiriq*, 38 (lit. 'two for forty'), variants in other dialects for 39 are *bir qäm qırq*, *bī kem q'χ* (litt. 'one for forty'). Subtraction, and not O., explains better the etymology of Mongol *najman*, 8, whose second element, *-man*, 10, is well attested (Kotwicz: 1929/30, 180-181), while the first could be connected (Miller: 1975, note 2) with proto-Altaic *ž̥ir ~ *ž̥ür, 2.

ENQUÊTE SUR L'UTILISATION DES LANGUES AUTOCHTONES D'AMÉRIQUE

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En décembre 1989, un questionnaire portant sur le statut et les domaines d'utilisation des langues autochtones d'Amérique a été préparé par D. Ronan Collis et moi-même. Rédigé en quatre langues (français, anglais, espagnol et portugais), il a été expédié à des linguistes et à divers organismes oeuvrant en milieu autochtone (organisations missionnaires, organismes de défense des droits de l'homme).

Les répondants sont des autochtones ou des personnes ayant une longue expérience de travail en milieu autochtone (linguistes, travailleurs sociaux, missionnaires, membres d'organisations de défense des droits de l'Homme, etc.). Comme il était évident que ces répondants, dans leur majorité, ne seraient pas des sociologues ou des sociolinguistes et qu'il était impensable pour des raisons financières de mener une réelle étude sociolinguistique sur l'utilisation d'autant de langues, les possibilités de réponses dans le questionnaire ont été simplifiées. Il est en effet vite apparu que la plupart des personnes refuseraient de se prononcer si l'échelle des réponses faisait des distinctions trop fines. Aussi seulement quatre catégories ont été retenues : toujours (c'est-à-dire dans 100 % des cas), souvent (plus de 51 %), parfois (50 % et moins), jamais (0 %). Les mesures ainsi obtenues ne sont par conséquent qu'indicatives, mais il ne pouvait en être autrement en l'absence d'enquêtes sociolinguistiques détaillées pour la majorité de ces langues.

J'ai reçu des réponses pour 93 langues autochtones des trois Amériques. Dans certains cas, il y a eu plus d'une réponse pour une même langue; lorsque les évaluations divergeaient, on a alors fait la moyenne. Certaines réponses peuvent par ailleurs ne concerner qu'une variété géographique d'une même langue : ainsi, le micmac n'est représenté dans l'enquête que par sa variété parlée au Québec et l'aymara que par sa variété chilienne. De plus, j'ai tenté de constituer un groupe témoin de «petites» langues; j'ai reçu des réponses pour cinq langues : l'aranais (variété de gascon parlé par 5 000 personnes au Val d'Aran en Catalogne), le féroïen (48 000 locuteurs au large de l'Écosse), le mannois (200 locuteurs comme L2 dans l'île de Man en mer d'Irlande), le māori (50 000 locuteurs en Nouvelle-Zélande) et le rapa nui (2 500 locuteurs dans l'île de

Pâques). La présente communication ne tiendra cependant compte qu'exceptionnellement des résultats de ce groupe témoin.

Des 93 langues autochtones d'Amérique de l'échantillon, 12 sont parlées par plus de 100 000 locuteurs, 25 ont entre 10 000 et 100 000 locuteurs, 22 ont entre 1 000 et 10 000 locuteurs, 19 entre 100 et 1 000 locuteurs et 15 langues sont parlées par moins de 100 personnes. Les résultats qui vont suivre seront donnés en fonction de ces cinq groupes.

Avant de présenter les résultats de l'enquête, il est important de faire deux mises en garde méthodologiques : 1. Comme il est évident à la lecture de ce qui précède, les langues de l'enquête n'ont pas été prédéterminées de façon aléatoire de sorte que l'on ne peut transposer directement la situation décrite dans l'enquête à l'ensemble des langues amérindiennes; 2. Pour les raisons déjà expliquées, la grille utilisée ne permettait pas des distinctions subtiles dans les réponses, aussi il faut plutôt voir dans les résultats qui seront présentés de grandes tendances (c'est d'ailleurs pourquoi les résultats sont livrés par groupe de langues et non pour chaque langue en particulier).

Une des premières questions de l'enquête portait sur le taux d'assimilation. Malheureusement, plusieurs n'ont pas répondu à la question faute de données fiables, d'autres ont compris la question comme portant sur le taux de bilinguisme. Il n'est donc pas possible d'offrir une évaluation mathématique du degré d'assimilation. En revanche, quelques questions portaient sur l'utilisation de la langue autochtone entre personnes d'une même génération et entre personnes de générations différentes. Lorsque les résultats se maintenaient au même niveau d'une génération à l'autre, la langue était considérée comme «stable» (même si le volume déclaré d'utilisation était faible). Si l'utilisation diminuait d'une génération à l'autre puis se maintenait au même niveau dans les générations suivantes, la langue était alors classée comme «stabilisée». Si le volume d'utilisation de la langue diminuait régulièrement entre les générations, on rangeait la langue dans la catégorie «en déclin». Si, enfin, dans une génération donnée, l'utilisation de la langue a été évaluée comme nulle, la langue a été considérée comme «menacée».

Les résultats portant sur la transmission intergénérationnelle montrent qu'il n'y a aucune langue à transmission stable dans la catégorie des langues comptant plus de 100 000 locuteurs; la majorité des langues de cette catégorie sont cependant stabilisées. Les langues dont la transmission entre générations est stable comptent toutes entre 100 et 100 000 locuteurs; elles sont relativement peu nombreuses : 14, soit 15 % de l'échantillon. Les langues menacées (c'est-à-dire dont la transmission intergénérationnelle n'est plus assurée) prédominent parmi les langues parlées par moins de 1 000 personnes : 22, c'est-à-dire près du quart de l'échantillon (24 %). Près du tiers (28) de l'échantillon est constitué de langues «stabilisées», c'est-à-dire de langues ayant subi des pertes plus ou moins importantes. Le tableau qui se dégage est donc celui d'un effritement assez général de la base démographique de la plupart des idiomes amérindiens.

M'inspirant de l'exemple d'Héctor Muñoz Cruz (1987) qui a étudié trois langues mexicaines, l'otomi, le mazahua et le nahuatl,

selon leur utilisation dans des situations «formelles» ou «informelles», j'ai réparti les réponses à un certain nombre de questions de l'enquête entre domaines d'utilisation formelle (tribunaux, administration, offices religieux, affichage, médias, enseignement, littérature) et domaines d'utilisation informelle (essentiellement les conversations avec les parents et les amis). Les résultats ont été calculés sur une base de 100. Lorsque l'on étudie ces résultats langue par langue, on constate que les langues autochtones d'Amérique sont confinées aux domaines d'utilisation informelle, leur utilisation dans des domaines formels ayant pour 85 langues (91 % de l'échantillon) un indice inférieur à 50; en outre, il n'y a guère qu'une demi-douzaine d'exceptions où l'indice d'utilisation formelle dépasse celui d'utilisation informelle et, dans tous les cas sauf un, la différence n'est pas suffisamment grande pour être vraiment significative. Le seul cas vraiment intéressant est celui de l'inuktitut parlé dans les Territoires du Nord-Ouest : on peut interpréter la supériorité de l'indice «formel» sur l'indice «informel» par une intervention des pouvoirs publics pour contrecarrer l'érosion linguistique (l'inuktitut est maintenant l'une des langues officielles des Territoires du Nord-Ouest, ce qui contribue visiblement à son utilisation plus grande en situation formelle). La situation de l'inuktitut des Territoires du Nord-Ouest est curieusement parallèle à celle d'une langue du groupe témoin, le mannois, dont l'utilisation dans des domaines formels dépasse (et de loin, puisqu'il s'agit à toutes fins utiles d'une langue morte) l'usage qu'on en fait dans la vie de tous les jours; dans ce cas précis, il s'agit d'une survie artificielle où la langue sert de symbole à l'identité locale (par exemple, les lois ne sont pas traduites en mannois, à l'exception de leurs titres); en modifiant une expression utilisée par J.A. Laponce (1984), c'est ce qui pourrait être appelé une «langue-épinglette». C'est peut-être le sort qui attend plusieurs langues amérindiennes ayant peu de locuteurs : elles ne disparaîtront pas complètement, car elles continueront à être utilisées occasionnellement dans certains domaines (par exemple, pour des inscriptions publiques) et seront encore enseignées (probablement comme le latin ou le grec ancien), mais elles ne seront plus des instruments de communication dans la vie quotidienne.

Les réponses sur l'enseignement montrent que 30 des 93 langues ne sont pas enseignées (il y eut 8 refus de répondre, vraisemblablement parce que la question exigeait des réponses trop précises pour chaque année du primaire : on pourrait penser que, dans ces 8 cas, la langue autochtone est peut-être enseignée mais que le répondant ne disposait pas des renseignements demandés). Élément paradoxal, ce ne sont pas les langues parlées par plus de 100 000 personnes qui sont le plus enseignées mais celles qui ont entre 10 000 et 100 000 locuteurs; elles sont suivies du groupe de langues comptant entre 1 000 et 10 000 locuteurs.

Mais un résultat encore plus paradoxal est offert par l'analyse des réponses à la question portant sur l'emploi de la langue autochtone dans les offices religieux : si l'on fait abstraction du groupe des langues ayant moins de 100 locuteurs, on constate que moins les langues ont de locuteurs, plus elles sont utilisées à

l'église! Le plus haut taux d'utilisation se trouve en effet dans la catégorie des langues ayant entre 100 et 1 000 locuteurs.

L'enquête permet aussi d'évaluer les relations des langues autochtones avec la modernité. En effet, des questions portaient sur leur utilisation dans les médias. Il existe des périodiques (unilingues ou bilingues; parfois, il ne s'agit que de quelques articles par numéro) dans 26 langues autochtones sur 93 (il y eut deux refus de répondre). Des émissions de radio existent dans 26 langues sur 93; mais il y eut 18 refus de répondre qui peuvent avoir été occasionnés par le fait que le répondant était incapable de répondre à la question trop précise qu'on lui posait (c'est-à-dire le nombre d'heures hebdomadaires de diffusion). C'est le groupe des langues ayant plus de 100 000 locuteurs qui arrive en première place pour le temps d'antenne alors que pour les autres points que nous avons analysés il n'occupe jamais ce rang; ce fait est peut-être à mettre en relation avec le nombre élevé de non-réponses pour les autres groupes et, dans ce cas, ce groupe pourrait ne pas occuper la première place. Quant à la télévision, elle existe seulement dans 11 langues sur 93 (quatre refus). On voit donc que la majorité des langues amérindiennes se situent, pour l'instant du moins, en marge du monde moderne.

Le dernier point qui sera ici traité est celui de la «visibilité» des langues autochtones, c'est-à-dire de leur présence dans le paysage (sur des affiches, des enseignes, dans des raisons sociales). Les résultats indiquent que 48 langues (52 % de l'échantillon) n'ont aucune visibilité. Ce sont les langues ayant entre 1 000 et 100 000 locuteurs qui sont le plus «visibles», plus même que les langues comptant plus de 100 000 locuteurs.

Quelques conclusions peuvent être dégagées de l'analyse qui précède, en tenant bien sûr compte des réserves méthodologiques déjà exprimées sur la non-généralisabilité des présents résultats à l'ensemble des langues amérindiennes. D'abord, il est extrêmement curieux de constater que les langues ayant le plus grand nombre de locuteurs (notre groupe de 100 000 et plus) sont moins utilisées et moins enseignées que des langues moins parlées. Cela doit bien sûr être apprécié en tenant compte de la proportion de ces locuteurs dans la population globale de chaque pays et aussi en tenant compte du fait que les langues qui ont le statut le plus élevé sont plutôt des langues du Grand Nord, ayant donc un nombre de parlants plus faible; mais il n'en demeure pas moins que la situation est préoccupante pour qui croit en la démocratie. Une autre conclusion qui s'impose concerne l'état souvent très précaire de plusieurs de ces langues; 14 ont moins de 50 locuteurs et il y a lieu de croire que, dans l'ensemble, ce sont 22 langues qui sont sérieusement menacées de disparaître d'ici tout au plus quelques décennies. Pour plusieurs, le mouvement est sans aucun doute irréversible. Il y a donc urgence à compléter, pendant qu'il en est encore temps, la description scientifique de tous ces parlers.

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UNE LANGUE SURVIT-ELLE EN TRADUCTION? I.B.SINGER ET LE YIDDISH

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En littérature comme dans nos rêves, la mort n'existe pas.
I.B. Singer

I LA PROBLÉMATIQUE

Les métaphores désignant la traduction ne sont généralement guère tendres à son égard. Revers d'un tissu, monnaie dévaluée, argent changé, fausse monnaie, reproduction de tableau quand ce n'est pas tentative de faux. Déguisement, maquillage: le traducteur apparaît mauvais comédien ou trop bon acteur -ce qui revient au même: il trompe le lecteur.

Pour quelques images positives cependant (le traducteur comme amant ou comme interprète, au sens musical), le bilan métaphorique est plutôt négatif et son enseignement est certainement précieux puisque la métaphore -à commencer par son étymologie grecque- est une forme de traduction. Tout cet énoncé rhétorique renvoie à une pensée de la traduction comme perte, perte matérielle, celle des signifiants de la langue de départ qu'on ne peut totalement reconstituer, mais aussi perte métaphysique, deuil: comme s'il y allait d'une disparition, de la mort de la langue et du texte d'origine. Le discours traductologique traditionnel voit dans la traduction un processus de substitution, de remplacement, d'oubli: dans une perspective structurale d'équivalence et de similarité, le texte d'arrivée prend la place du texte de départ.

De ce point de vue, une langue en voie de disparition, une langue menacée verrait dans la traduction la marque même de sa fin. Là où elle ne pouvait plus assurer la vitalité de ses textes, un autre medium langagier viendrait suppléer à l'extinction de ses forces vives. Inutile de mettre en relief la dimension biologique, organique, de cette conception. Il est en revanche possible et légitime d'adopter une autre perspective, historique, où la traduction assumerait une toute autre fonction, une fonction de survie, où la langue menacée connaîtrait dans et par la traduction une continuité, une perpétuation.

II CORPUS ET EXEMPLES

Rien ne peut mieux nous servir à mener cette réflexion que le cas du yiddish, illustré par l'oeuvre de Isaac Bashevis Singer.

"Majesté, Mesdames, Messieurs, on me demande souvent: pourquoi écrivez-vous dans une langue qui se meurt? (...) D'abord, j'aime écrire des histoires de fantômes, et rien ne convient mieux à une histoire de fantômes qu'une langue mourante."

Ainsi commença-t-il son discours de Stockholm en recevant le Prix Nobel de littérature en 1978. Les journalistes le saluèrent comme le "dernier écrivain yiddish" lors de sa récente disparition. Dernier écrivain d'une langue qui, après avoir failli disparaître dans les tourmentes de l'histoire, est désormais menacée par la disparition progressive de ses usagers, même si depuis les années soixante, on constate un renouveau limité de son enseignement, retour aux sources de générations désenchantées qui explique aussi un fort mouvement de traduction de la littérature yiddish vers les langues occidentales.

Il est à noter que le yiddish lui-même est une langue de traduction, c'est-à-dire que dérivé du haut-allemand, il s'est constitué en empruntant largement à diverses langues européennes et sémitiques. Comme le disait Kafka: "Des migrations de peuples traversent le yiddish de bout en bout." (1980 : 372) Comme le disait plus allègrement le journaliste Charles Rappoport: "Je parle dix langues - et toutes en yiddish." (Rosten 1970 : XVI)

Peut-être est-ce la raison pour laquelle Singer, si attaché au yiddish, collaborait facilement avec ses traducteurs au point de revendiquer la co-paternité de ses récits en anglais, comme une nouvelle écriture, une survie. Au demeurant, on constate paradoxalement le plus grand nombre de parutions de recueils de contes et nouvelles en anglais qu'en yiddish alors que les textes de Singer ont d'abord été publiés - et depuis très longtemps - dans un journal yiddish new-yorkais.

L'influence possible d'une langue sur une autre par sa traduction peut se marquer à deux niveaux: le lexique et la syntaxe. A comparer les traductions de Singer en anglais et en français, on s'aperçoit aisément de la différence des politiques traductionnelles à ces deux niveaux. L'ajout dans la version française d'un glossaire, incomplet de surcroît, marque aussitôt la rigidité lexicale de cette traduction. Résistance qui se retrouve quant à la syntaxe comme le montre l'absence de transfert des structures typiques du yiddish (inversion et juxtaposition).

Les exemples suivants sont tirés de deux nouvelles, empruntées à la dizaine de recueils parus en anglais et en français. D'emblée, une objection possible doit être examinée. La traduction française n'est pas établie à partir de l'original yiddish mais à partir de la version anglaise. Le fait en soi nous informe déjà de la politique d'une institution littéraire et linguistique quant aux autres langues et de son degré d'ouverture, de réceptivité. La pratique, cependant, est généralisée à l'ensemble des langues autres que l'anglais, sans doute parce que la version anglaise est contrôlée et "autorisée" par l'auteur (Singer 1979 : III). Par ailleurs et plus pertinemment, travaillant à partir d'une langue moins lointaine, moins étrangère pour le français que le yiddish, on pourrait s'attendre à ce que les processus d'intégration, d'influence s'opèrent plus facilement. Nos exemples prouveront le contraire.

"The cafeteria/La cafétéria":

- "The moment I sit down at a table, they come over." (1970 : 77)
- "Dès que je m'installe à une table, ils viennent vers moi." (1980 : 65)

En anglais, la construction syntaxique par juxtaposition reproduit la version originale (1982 : 43), de même que les choix lexicaux "sit down" et "come over" là où en français la conjonction "dès que", les termes "s'installer" et "vers moi" introduisent un effet de littérarisation contraire à l'oralité ou à l'orature (Meschonnic 1985 : 93 sq.; Hagège 1986 : 110) à l'œuvre dans le texte yiddish.

"The seance/La séance":

- "Even from kreplach one has enough." (1979 : 10)
- "On peut avoir assez de tout, même de *kreplech*." (1985 : 101)

L'anglais respecte l'inversion syntaxique, intègre le terme alimentaire alors que le français l'exterritorialise (par les italiques), vainement puisqu'il ne figure pas dans le glossaire, en un effet d'étrangeté insignifiant et purement rhétorique (il ne fait que signaler l'étrangeté, sans lui donner sens).

- " «Trance-shmance», Dr Kalisher grumbled to himself. «The ghost is late, that's all. Who does she think she's fooling? Just crazy - meshugga.» (1979 : 10)

- " «Transe, transe...» murmura le professeur Kalisher, plus pour lui que pour elle. L'esprit est en retard, c'est tout. Qui cette vieille sotte croit-elle tromper? Elle est folle - complètement *meshuggah*, et voila." (1985 : 101)

Le mot en italiques ne figure pas non plus dans le glossaire et les ajouts participent encore de l'effet de littérarisation prémentionné. L'effet morphologique de répétition avec ajout du *sh* est abandonné alors qu'il est signifiant en soi.

- " «[The spirits] they have their motives and their moods. Have a little patience.»

«Well, if one must, one must.»" (1979 :10)

- " «(...)on ne peut pas leur donner d'ordres... Ils ont leurs raisons, leurs humeurs... Soyez un peu patient. /- Bon, si on ne peut pas faire autrement...»" (1985 :100)

Or cette dernière phrase, explicitement un calque syntaxique du yiddish (non reproduit en français) ne figure pas dans la version en yiddish (1980 : 102). Celle-ci accueille au demeurant un Dr Gomviner et non un Dr Kalisher comme en anglais (la version française en fait un "Professeur Kalisher"), et nomme la medium Kopitskis et non Kopitzky. On ne peut conclure à la trop grande liberté du traducteur puisque Singer lui-même participait à la rédaction de la version anglaise. On peut au contraire remarquer que la traduction, loin d'être la reproduction mimétique de l'original, se présente comme un véritable travail de (re)création s'inscrivant dans la ligne de l'original, le développant, le prolongeant.

III LA TRADUCTION COMME SURVIE

Mon propos n'est pas de verser dans un stérile exercice de stylistique comparée et de reproduire les lieux communs sur la souplesse de l'anglais et la raideur du français. Je ne vise qu'à montrer comment il est possible pour une langue de trouver refuge et survie dans un autre cadre linguistique. Il est néanmoins significatif de constater que les aspects stylistiques signalés à propos du yiddish se retrouvent chez nombre d'auteurs américains (voir Ertel 1980; Stora-Sandor 1984) alors que l'institution littéraire française -le cas est différent au Québec- réserve une place somme toute marginale à des écrivains maniant une langue baroque et hétérodoxe, tels un Albert Cohen ou un Jacques Stephen Alexis. Notons aussi que dans le domaine français lorsque l'écriture se fait rebelle, elle reste encore dans des normes tout à fait classiques: songeons par exemple à la poésie de Rimbaud, de Char ou des surréalistes.

On sait que la langue a partie liée avec l'idéologie, qu'il est des langues hégémoniques comme des langues minoritaires, des langues de pouvoir comme des langues de résistance. Ce que Deleuze et Guattari disent des relations entre les langues à l'intérieur d'un même groupe s'applique tout à fait au processus traductif puisque celui-ci, avant d'être *transport* d'une langue à une autre, est *rappart* entre ces langues et que le texte produit, donné comme traduction, porte en lui la marque de ce lien métonymique: "(...) cette étude des fonctions incarnables dans des langues distinctes tient seule compte directement des facteurs sociaux, des rapports de forces, des centres de pouvoir très divers; elle échappe au mythe «informatif», pour évaluer le système hiérarchique et impératif du langage comme transmission d'ordres, exercice du pouvoir ou résistance à cet exercice." (Deleuze et Guattari 1975 : 43). La traduction brouille effectivement les cartes et les frontières - l'adage l'associant à la trahison se justifie ici. Les notions d'hypertextualité et de polysystème développé en littérature comparée et en traductologie décrivent ce phénomène où un texte, sous couvert de traduction, est à même d'introduire de l'étrangeté dans un système autrement clos (voir Lambert 1989; Berman 1984).

Nos exemples ont montré que la traduction peut assurer la survie langagière si l'idéologie de la traduction et de la langue s'y prêtent. Comme le dit Singer pour défendre le yiddish accusé de n'être qu'un jargon: "Toutes les autres langues sont-elles les vierges sans tache qu'elles veulent paraître? La vérité, c'est que chaque langue a un passé -et pas toujours simple." (in Saporta 1984 : 20)

En fait, ce qui survit d'une langue dans sa traduction, au-delà de ses particularismes lexicaux ou syntaxiques, c'est le fait qu'elle est langue, qu'elle habille le dire dans une énonciation particulière -le fait de l'habillage, non les couleurs ou les

formes de l'habit. Pour reprendre l'image de Walter Benjamin (1971: 268) qui compare la traduction au manteau royal: un vêtement n'est pas le corps mais prouve qu'il existe un corps même si celui-ci a disparu. Il en marque la survie.

Ce qui constitue précisément le thème central de la théorie de la traduction benjaminienne, exposée dans son célèbre essai "La tâche du traducteur". Chez Benjamin, la fonction de la traduction n'est pas de communication (ce que, au demeurant, il dénie également au langage en tant que tel) mais de mise en contact des langues afin de révéler, au-delà des rencontres et convergences historiques, leur nature commune: la visée de communicabilité. Elles sont langues non par ce qu'elles *peuvent* dire mais en ce qu'elles *veulent* dire. Ce que la traduction révèle de la langue de départ et de la langue d'arrivée, c'est leur commune nature de langue qui leur fait adopter des modes de visée expressive différents mais complémentaires.

Pour Benjamin, la traduction est une "forme" (1971 : 262), c'est-à-dire qu'il existe en certains textes une dimension de traductibilité qui dépasse la simple fonction de communication en l'ouvrant à une après-vie ou une survie (*Überleben*).

La traduction n'efface pas l'original mais dévoile le lien entre texte de départ et texte d'arrivée. Elle fonctionne comme une mémoire recueillant les modes d'expression des œuvres langagières. De même que pour Benjamin l'histoire n'est pas une linéarité chronologique homogène mais une succession de moments chargés de *Jetzezeit* - temps du maintenant ou du présent - (Benjamin 1983 : 204) qu'il s'agit de faire dialoguer, la traduction établit le dialogue entre les textes et les langues: "L'histoire des grandes œuvres d'art connaît leur descendance à partir des sources, leur structuration à l'époque de l'artiste, et la période de sa survie, en principe éternelle, dans les générations suivantes. Cette survie, lorsqu'elle a lieu, se nomme gloire. des traductions qui sont plus que des communications naissent lorsque, dans sa survie, une œuvre est arrivée à l'époque de sa gloire. (...) En elles la vie de l'original, dans son constant renouveau, connaît son développement le plus tardif et le plus étendu." (1971 : 264)

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VOT, OCCLUSION AND DURATION AS DISTINCTIVE FEATURES IN BERBER.

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1. INTRODUCTION

The Voice Onset Time (VOT), as defined by Lisker and Abramson (1964-67) is the time interval between the burst that marks release of the stop closure and the onset of periodicity which reflects laryngeal vibration. It is well known that the VOT is an important physical cue in distinguishing voiceless stops from their voiced homologues, and also that its duration depends on the manner and the place of the articulation of the stop consonants. Voiceless stops have a longer VOT than their voiced correlates ones, and this duration becomes longer as the place of articulation moves from a front to a back position. We have corroborated these relations in Berber language.

On the other hand, A. Lahiri and J. Hankamer (1988) on the basis of an investigation made in Turkish and Bengali languages, conclude that the critical acoustic feature distinguishing geminate voiceless stops /t:/, /k:/ from their corresponding non-geminates /t/, /k/ is the duration. But both sounds appear just in an intervocalic position. We wonder what happens in other positions, above all in the initial one where there is no way of measuring the occlusion duration of the voiceless stops.

Our purpose in this study is not to differentiate geminates from non-geminates or tense consonant but to try to complete Lahiri et Hankamer's analysis and see which acoustic parameter or parameters that distinguish phonologically the tense consonants from their counterparts non-tense ones, and not only in an intervocalic position but also in the final and medial position, be it intervocalic or not.

First, we want to know, if it is the VOT or the occlusion phase that differentiates both versions of stops; and second, if it is the duration or intensity that differentiates the tense from non-tense consonants in fricatives, nasals, vibrants and laterals.

For that reason we have chosen Tashlhit, our own language that is the Berber variant spoken in the South of Morocco. We think it is important to underline that Berber is only a spoken language, it is not written. This means, the native Berbers have to acquire and develop, through hearing alone, auditory and discriminative mechanisms that enable them to understand one message from another. The tenseness in Berber is an important phonological feature that can be added deliberately to any one of the consonants and semi-consonants. With the opposition tense vs non-tense, we do not refer to the voiceless vs voiced opposition and nor to the geminate vs non-geminate one.

2. MATERIAL

The inexistence in Berber of the /p/ and because of the "fricativization" of the non-tenses /k/ and /g/ ($/k/ > /ç/$; $/g/ > /j/$ =voiced fricative palatal) in Tashlhit, and also the impossibility to find a minimal pair with the uvular voiceless /q/, we have prepared 20 minimally distinctive pairs formed by the Berber isolated words. The consonants examined are / t, f, s, ð, m, l, r / opposed only by their degree of articulatory tenseness / t*, f*, s*, ð*, m*, l*, r* / which we transcribe, with an asterisk to distinguish them from the geminate consonantes, commonly transcribed with the symbol /c:/.

we have tried as much as possible for the sounds to appear in the initial, medial and final position . For example,

tutas	(she hit him)	vs	t*utas	(you forgot him)
tahl	(Get married !)	vs	t*ahl	(she got married)
tut	(she hit)	vs	t*ut	(you forgot)
fitin	(Give him it!)	vs	fit*in	(Give her it!)
asataj	(take the tea !)	vs	asat*aj	(lood)
ut	(hit)	vs	ut*	(hit him)
sut	(Drink it !)	vs	s*ut	(give him a drink)
ifis	(bear .n.)	vs	ifis*	(he kept quiet)
isis	(it has boiled)	vs	is*is	(well,..thatis..)
ifi	(it has burst)	vs	if*i	(he poured out)
çmi	(Smoke)	vs	çm*i	(you .fem)
ishib	(he is become old)	vs	iʃ*ib	(it makes old)
turut	(she gave birth to him)	vs	tur*ut	(pride)
ilas	(he sheared an animal)	vs	il*as	(it is dark)

3. EXPERIMENTAL PROCEDURE

In one of our studies, we have found that the tense consonants have a general mean duration of 165 ms and their correlate non-tense have 79 ms. And in turn, the consonants pair /t/ and /t*/ , calculated on basis of 30 real minimal pairs, reveal means of 176 ms for /t*/ and 98 ms for /t/ with the VOT duration of 25 ms and 38 respectively. As we can see the duration of the VOT is inversely correlated with the degree of the consonant tenseness. The longer duration of the VOT corresponds to the lower tenseness of the consonant and vice-versa. That is because of the character of affrication of the non-tense /t/ in Tashlhit, caused by the relaxed and slow off-glide of the articulators in comparison with of their abrupt movements in the production of tense /t*/.

The words were recorded by a native speaker of Tashlhit in an anechoic chamber.The experiment consists in manipulating artificially the sounds in discussion by means of the technique Gating/Editing of the Kay sonograph 5500.

For /t/ vs /t*/ , we have cross-spliced the VOT of the non-tense /t/ with the VOT of the tense /t*/. For instance, we extracted the VOT of /t/ in "tahal" and put it the place of the VOT of /t*/ in the other member of the pair, "t*ahl" keeping intact the rest of the components; and vice-versa.

For the consonants of the other categories, we substituted the original non-tense consonant with a segment of the same duration and preferably with greater darkness, of its tense counterpart; and this latter in turn, has been complemented by various and simultanies segments of its corresponding non-tense consonant. These segments joined together totalize the same duration as the tense sound. The manipulation has always been done respecting the characteristics of the articulatory movements manifested in the spectrum.

4. PERCEPTION

The result has been recorded from the sonograph en cassette and submitted for a perceptual identification to seven moroccan students who were preparing in Barcelona their doctoral dissertation. All of them are native and perfect speakers of Tashlhit. They were submitted to the test individually and separately without informing them previously about the purpose of the test and nor the manner in which the material has been elaborated. They were asked firstly to understand and explain or translate the word after each presentation and, secondly, to judge the quality of the sound or rather of the degree of the tenseness if it is according to its natural production or, on the contrary, it is perceived as being adversely affected. They were also informed that they could ask for the repetition of the recording of the word if needed.

5. RESULTS AND DISCUSSION

5.1. /t/ vs /t*/

All the words that have the phonologic opposition, that is the presence vs absence of tenseness between /t/ vs /t*/ in medial and final position have been understood in their original meanings, in other words the meaning before the manipulation. On the contrary, the words that present the same opposition in initial position they have completely interchanged the meaning. For instance, in the pair "tahl" (Get married !) vs "t*ahl" (she got married), after cross-spliced the VOT between the initial /t/ and /t*/, the words have also interchanged their respective original meaning. The first word has been understood with the meaning of the second member of the pair and vice-versa.

With regard to the subject's impression about the production of /t/ and /t*/ , they have all manifested their dissatisfaction. They say both sounds were not pronounced as in Tashlhit fluent speech. They found /t/ (with VOT of /t*/) a little bit more tense, and /t*/ (with VOT of /t/) a little bit less tense, both than in natural speech.

From this study, we can conclude that in a position where the occlusion phase is not delimitated, as it is in initial position, the VOT serves to identify a tense /t*/ from its correlate non-tense /t/, and consequently able by itself, to change the meaning of the message. This finding seems to contradict, at least in an incial position, Lahiri et Hankamer's (1988) affirmation even when their study consists only in the geminate vs non-geminate consonants.

On the contrary, for the pairs that present the opposition in medial (be it intervocalic or not) and final position that is to say in all the positions where the occlusion is delimitated by an acoustic segment, even if by the VOT alone, the same as in the final position, the occlusion is a sufficient feature to distinguish both versions of the sounds: /t/ vs /t*/. In this case our finding is according to the both authors the same.

5.2. Consonants of the other categories.

The rest of the consonants examined here, fricatives, nasals, laterals, vibrants, the test proves that the duration of the sounds, independently of their place in the words, is the only one acoustic feature that makes the listener distinguish perceptually a tense sound from its corresponding non-tense one, and therefore, phonologically, the meaning that it carries in the place of another.

The intensity does not play, perceptually any distinctive role. On the contrary to the manipulated /t/ vs /t*/ , the subjects did not perceive any difference between the manipulated sounds and natural speech.

6.CONCLUSION.

In this paper, on the basis of the minimal pairs of the real speech, we have shown that in the Berber variant of Tashlhit, the acoustic features that distinguish

perceptually and therefore phonologically both versions of the same consonant, tense vs non-tense ones are:

-Firstly the VOT in initial position; secondly, the occlusion in other positions for the pair /t/ vs /t*/ and thirdly, the duration, independently of the degree of intensity, for fricatives, laterals, nasals and vibrants.

Given that in Berber, the tenseness is a phonological feature, these three elements VOT, occlusion and duration are necessary and sufficient, each one in itself, to carry the information and also to change completely the meaning of the message.

7. NOTES.

- (1). This study forms part of my thesis project for the degree of Ph.D. in acoustical description of Tashlhit berber variant.
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BILINGUAL EDUCATION: PRESERVING THE MAYAN LANGUAGE

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1. INTRODUCTION

Swadesh (1948) stated that language is one of the most deep seated and persistent cultural facts that identifies and characterizes a community. Although the indigenous Mayan language has been stigmatized since the Spanish conquest, it was used by the hacendados and missionaries for social and religious domination and has been spoken uninterruptedly up until the present.

It is said that a linguistic minority has maintained cultural vitality if its language and group members are well represented formally and informally in a variety of institutional settings. Since Mayan is used in the home, at work, and for religious ceremonies and is officially present in education and in the media, one could conclude that the prestige of the language is increasing along with linguistic loyalty. This, however, does not seem to be the case. The use of the vernacular language is gradually being restricted to the family domain of everyday life (Pfeiler 1988) and there has been a reduction in the number of Mayan speakers. Official census data indicates that in 1970, 40.6% of the population spoke Maya while in 1990 only 36.1% did so. (Secretaria de Industria y Comercio 1973, Censo General de Poblacion y Vivienda 1990). Moved by the alarming decrease in Mayan speakers in the last 20 years, and taking advantage of the recent impulse provided by the modernization programs initiated by the government, a group of multicultural and multidisciplinary researchers and bilingual educators decided to analyze the bilingual education system in order to propose innovative ways of supporting the present bilingual curriculum. This is important because the use of the minority language in the Government Education System is essential for the vitality of ethnolinguistic groups. As Giles put it "une langue qu'on n'enseigne pas est une langue qu'on tue" (Giles H., R.V. Bourhis & D.M. Taylor 1977: 316).

2. BILINGUAL AND BICULTURAL EDUCATION IN MEXICO

The bilingual-bicultural education system in Mexico was founded in 1955 by the Dirección General de Educación Indígena (DGEI) of the Secretaría de Educación Pública (SEP). Until 1980 the linguistic policy was made for rather than with the indigenous population. More recently a type of participatory indigenism has been established. One of the partial objectives (Fracciones del Art. 50 de la Ley Federal de Educación) underlines the importance of the indigenous language:

Alcanzar mediante la enseñanza de la lengua nacional un idioma común para todos los mexicanos, sin menoscabo del uso de las lenguas autoctonas. (Fracción III)

The model of the indigenous education program for the Mexican bilingual/bicultural primary schools can be defined as follows: it is indigenous because it presupposes the cooperation of community members and teachers; bilingual because it supports the use, the development and the systematic learning of the mother tongue, while Spanish is taught as second language; and finally bicultural, because the content of the programs is based upon the cultural roots, ideas and history of the ethnic group. These characteristics are enriched by elements of national and universal cultures. (Gleich: 1989)

2.1 The bilingual and bicultural education system in Yucatan

2.1.1. Infrastructure

The Department of Indigenous Education in Yucatan is comprised of six supervisory zones which are located in Valladolid, Peto, Maxcanú, Sotuta, Ticul, and Tizimin. Each of these zones has four or five school zones within its jurisdiction for a total of 25 supervisory zones in all. There are some 252 indigenous kindergartens and 167 bilingual primary schools in Yucatan today. Approximately 11,600 children are enrolled at the preschool level and 10,300 at the primary level for a total of 21,900 children. There are 496 preschool teachers and 454 bilingual primary school teachers. (a ratio of around 22 students per teacher)

2.1.2. The Educational material

At the preschool level there is reportedly one textbook. At the primary level (1st grade) there is a textbook aimed at teaching reading and writing in Maya. Additional grammar materials for the teachers, covering third to sixth grade, are published but apparently not distributed to teachers.

The textbook in Maya teaches reading and writing using pictures and their corresponding written words. First the vowels are presented then the consonants are contrasted. The student begins with simple words, builds up to phrases and sentences and finally is able to read short passages.

2.1.3. The difficulties

SEP-DGEI inform us that of the generation of children who studied primary school from 1978 to 1984, only 19.75% finished primary school in the

indigenous system whereas 50.25% finished in the national system.

Some of the problems identified in the education system are:

- A lack of programs specifically oriented towards bilingual education.
- A lack of didactic material and advice. Material in the mother tongue is available only for one grade.
- The textbook uses an alphabet which does not accurately reflect the Mayan phonemic system and which introduces unnecessary complexities in the learning of reading and writing.
- General deficiency in the training of bilingual educators. Their present training is not specifically aimed at bilingual and bicultural education.
- Lack of flexibility in the school calendar, which does not take into consideration the economic necessities of the ethnic groups and results in a high degree of absenteeism.

Of course there are external factors which influence the functioning of the bilingual system such as the poverty of indigenous families, poor nutrition, and negative attitudes towards bilingual education.

For these reasons the DGEI is launching a program to modernize the bilingual and bicultural education system, and our project contributes to that effort in the areas of the use of authentic cultural materials, the design of material specifically oriented towards learning a language in a bilingual context and finally the training of bilingual teachers in the use of these materials.

3. PROPOSAL TO IMPROVE THE BILINGUAL AND BICULTURAL EDUCATION SYSTEM.

3.1 Nature and scope of the project

This project proposes to create innovative educational materials in Mayan for use in existing bilingual education programs throughout the Yucatan Peninsula. It will hopefully motivate children in the continued, uninhibited use of both languages as well as stimulate curiosity about their own cultural and physical environments. The provision of additional tools allow teachers more freedom in the use of classroom materials. This is a three year project which will be carried out first in Yucatan through its network of bilingual schools.

3.2 Objectives

The overall objective of this project is to stimulate and support; the ethnic identity associated with the use of the Mayan language. The secondary objectives are: a) the analysis of the educational methods and the application of the present bilingual and bicultural system, b) the compilation of materials based on written and taped sources from Mayan Oral Tradition and c) the designing of didactic methods using the above materials at the preschool and primary school levels.

3.3 Methodology

The Mayan oral literature will be analyzed and classified into the categories

of story, legend and myth. Each of these categories will be further classified for different scholastic levels according to their content and style following the classification of Hansen (1947) and Robe (1973). The style of the material will be analyzed and adapted to the child's language as the case demands. The resulting texts will also be analyzed from the perspective of facilitating the reading and writing process in the mother tongue.

3.4 Participation

The bilingual teachers working in the communities will participate in the collection and translation of literary materials, as well as with the designing of written and audiovisual materials for teaching. The resulting materials will be reviewed and classified by anthropologists, communication specialists, and linguists, who will also take charge of the analysis and modification of the current Mayan alphabet. Linguists will be responsible for the translation and revision of all materials and for the adaptation of these to suit language learning needs.

Once this project has been implemented in Yucatan, it can be adapted to other ethnic groups in areas where bilingual and bicultural education programs exist.

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PRÉSENT ET FUTUR D'UNE LANGUE MENACÉE: LE ROMANCHE

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1. INTRODUCTION

Le romanche¹ est considéré traditionnellement dans les essais de classification des langues romanes comme l'un des groupes dialectaux rhéto-romans, à côté du ladin dolomitique et du frioulan. Tout comme eux, il manque d'unité, étant composé d'environ 15 groupes de parlers locaux qui ont développé 5 variétés littéraires – le sursilvan, le sutsilvan, le surmiran, le puter (haut-engadinois) et le vallader (bas-engadinois).

Il est parlé en Suisse par 0,8% de la population, surtout dans la partie orientale (canton des Grisons) et il a reçu, par le référendum du 20 février 1938, le statut de quatrième langue nationale de la Confédération. À l'encontre de l'allemand, du français et de l'italien, le romanche n'y jouit pas encore du statut de langue officielle. Recemment, en mars 1991, le conseil fédéral a proposé, par suite de longs débats, une révision de l'article 116 de la constitution fédérale, afin que le romanche devienne lui aussi langue officielle pour les relations de la Confédération avec les rhéto-romans.

Cet aperçu reflète la situation paradoxale du romanche: d'un côté, il présente des traits typiques pour une langue menacée – langue minoritaire, avec un nombre réduit de locuteurs par rapport aux standards européens, et sans unité interne; de l'autre côté, le cadre juridique qui lui est assuré est exemplaire par rapport aux autres langues minoritaires de l'Europe.

2. RECOL DU ROMANCHE. CAUSES

Depuis un siècle, le nombre des romanches s'est maintenu, en chiffres absolus, stable: 42 439 en 1850, 50 238 en 1980 (l'autre chiffre offert par les statistiques, 51 128, inclut aussi une partie des frioulans habitant en Suisse), tandis que leur pourcentage, face à l'augmentation massive de la population globale de la Suisse, ne cesse de baisser: de 2% en 1860 à 0,8% en 1970 et 1980 (Dörig, Reichenau 1983: 37; Vileta 1978: 385).

Seulement 36 017 (70,5%) d'entre eux habitent le canton des Grisons, les autres étant répartis dans presque toute la Suisse, surtout alémanique. Dans le territoire traditionnel (pour la définition v. Furer 1981: p. 53, n. 10 et 11) ne sont restés que 30 213 (59,1%), dont sursilvans 16 854, sutsilvans 1 245, surmirans 2 954, engadinois 9 160 (puter 3 613, vallader et Val Müstair 5 804).

Le territoire traditionnel lui-même a subi une profonde désintégration. Il y a un siècle, il était encore compact de la vallée du Rhin jusqu'à l'Inn. Maintenant, à l'exception de la vallée du Rhin antérieur (la Surselva) et de la Basse Engadine, tout le territoire présente un aspect composite, avec des enclaves de dimensions variables, fortement ou partiellement germanisées. Le recul du romanche devant

l'allemand est un processus visible: des 121 communes du territoire traditionnel, il n'y en avait, en 1970, plus aucune à 100% population romanche. Entre 1970 et 1980 la position relative du romanche s'est affaiblie dans 95 communes et s'est améliorée seulement dans 26 (tandis que l'allemand a amélioré sa position dans 97 communes). Il ne restait en 1980 dans le territoire traditionnel que 73 villages à majorité absolue romanche et 4 à majorité relative – face à 33 à majorité absolue allemande, 10 à majorité relative allemande et 1 à majorité relative italienne (Furer 1982: 65); la population des 73 villages où le romanche était encore majoritaire ne dépassait quand même pas 40,4% du total de la population du territoire traditionnel, tandis que, des 9 grandes communes de la région, 8 avaient une majorité allemande (Furer 1982: 65).

Le déclin du romanche coïncide avec le début du développement économique de la région, dont la grande majorité des habitants étaient jusqu'en 1860 des paysans. L'industrie hôtelière, très développée en Haute-Engadine, a amené avec soi la germanisation progressive du pays: entre 1900 et 1980 le pourcentage de la population romanche y a diminué de 47,9% à 23,1%, tandis que le pourcentage des allemands a augmenté de 24,9% (en 1860 il n'y avait que cca. 13%, cf. Schmid 1983:21) à 47,6% (Dörig, Reichenau: 43). Dans les communes de la partie supérieure de la vallée le romanche a perdu déjà depuis longtemps la majorité relative: en 1980 il y avait par exemple à San Murezzan/Saint Moritz 9,64% habitants romanches sur 52,41% allemands, 27,25% italiens et 10,69% autres (Furer 1982: tablles). Le même processus est en cours maintenant dans une partie de la Surselva (Laax et alentours). Le développement industriel n'a pas eu d'autres résultats: l'implantation des grandes usines chimiques à Domat/Ems près de Coire a fait disparaître presque entièrement le dialecte local.

Il n'est pas difficile d'entrevoir que le progrès de la germanisation a été facilité (et il l'est encore) par une "lacune" d'ordre juridique. Pour le romanche, langue nationale (art. 116 de la constitution fédérale) et langue du pays en Grisons (art. 46 de la constitution cantonale), le *principe de territorialité* (principe du droit constitutionnel non-écrit qui garantit l'unité de chaque territoire linguistique traditionnel), ne s'applique pas, c'est-à-dire le romanche n'est pas protégé *a priori* dans le territoire qui lui a appartenu traditionnellement. On n'a pas, en conséquence, de base légale pour assimiler linguistiquement les nouveaux-arrivés dans les villages romanches. Par contre, si le nombre des germanophones dépasse la simple majorité, le village est déclaré par le bureau fédéral de statistique comme allemand: Vileta 1978:94 cite le cas extrême du petit village Surava déclaré en 1970 comme germanophone, parce que de ses 200 habitants 91 avaient comme langue maternelle l'allemand et seulement 90 le romanche(!). Il est évident que la priorité accordée aux principes de liberté des langues et de paix linguistique favorise la naissance des îlots linguistiques et empêche une éventuelle action d'établir les frontières du territoire linguistique romanche.

Une autre cause de la situation précaire du romanche est le manque d'unité interne, dû à des raisons soit géographiques (la configuration des vallées), soit historiques (l'impact de la Réforme et l'absence d'un centre culturel unique pour tous les rhéto-romans). S'étant développé dans une région montagneuse avec peu de possibilités de contact entre les différentes vallées, il représente un ensemble de dialectes unitaires du point de vue génétique, mais assez différents l'un de l'autre, de sorte que la compréhension est relativement difficile entre les deux dialectes géographiquement éloignés (le sursilvan et l'engadinois). À l'intérieur de chaque dialecte se distinguent plusieurs groupes de sous-dialectes, dont l'évolution divergente s'explique de la même manière. Dans le cas extrême, un sous-dialecte peut être constitué par le parler d'un seul village: le parler de Bravnogn/Bergün est originairement surmiran, mais fort influencé par le puter, le village étant, à l'exception de ses voisins surmirans, protestant.

3. BILINGUISME

La condition linguistique des rhéto-romans suisses est le bilinguisme romançhe - allemand, auquel s'ajoute une diglossie facultative parler romançhe local - dialecte romançhe littéraire et une diglossie qui dans les dernières décennies est devenue obligatoire, bon allemand - Schwyzertütsch. Le romançhe représente un code orale par excellence, mais il peut satisfaire aussi aux exigences de la communication écrite. La communication professionnelle écrit peut se dérouler en romançhe ou en bon allemand. D'après une stratégie relativement compliquée, l'allemand (littéraire ou le dialecte suisse allemand de Coire) est employé aussi dans la communication orale; on parle allemand avec les personnes reconnues comme non-romanches, avec les romanches du groupe "opposé", c'est-à-dire avec les engadinois dans la Surselva et vice versa; dans les régions où la germanisation est plus avancée, il arrive aussi que deux rhéto-romans parlent entre eux en allemand parce que, par exemple, ils se sont connus à l'école allemande (Solèr 1990:179).

Le bilinguisme est en Grisons promu par l'école. L'école primaire (1^e - 6^e classe) a le romançhe comme langue de l'enseignement; l'allemand est enseigné depuis la 4^e année et remplace dès la 7^e le romançhe comme langue d'enseignement. Celui-ci continue à être enseigné 2-3 heures par semaine comme "langue maternelle" (4 heures au séminaire pédagogique de Coire). Vers la fin de leurs études, les élèves romanches ont la même compétence de l'allemand littéraire que leurs collègues allemands et se remarquent même par une meilleure connaissance de la grammaire du bon allemand (Cathomas 1977: 169).

Le bilinguisme, qui, d'un côté, représente la condition *sine qua non* de la survie du romançhe, se constitue, de l'autre côté, dans un véritable danger pour les dialectes. Les influences lexicales allemandes, auxquelles les puristes s'attaquent avec véhémence, sont les plus bénignes. Plus dangereux sont les calques au niveau syntaxique (v. des exemples chez Solèr/Ebneter 1988: 124-128 et Solèr 1990:182-184), qui ne sont pas toujours faciles à déceler, et les influences sur le système phonétique et même phonologique: on a attiré déjà en 1941 l'attention sur le fait que la distinction phonologique entre [č] ~ [č̄] et [g] ~ [ḡ] n'était plus systématiquement respectée (Baur 1955: 22); maintenant, l'opposition n'est plus réalisée par les jeunes sutsilvans bilingues (Solèr 1990: 181-182).

4. SITUATION ACTUELLE

Pour arrêter la régression du romançhe, la Lia Rumantscha, la principale organisation des rhéto-romans, a lancé plusieurs programmes: création et diffusion des néologismes, traductions, édition de grammaires, de dictionnaires, de moyens d'enseignement (qui s'adressent parfois à un seul village, par exemple le nouveau manuel de romançhe pour Bravuogn), soutien de la presse et de la littérature romançhe (notamment de la littérature destinée aux enfants et à la jeunesse), etc.

Le 4 juin 1992, la Lia Rumantscha a fêté le dixième anniversaire de la création de la nouvelle langue unifiée, le *Rumantsch Grischun (RG)*, dont les principes ont été exposés dans les *Richtlinien für die Gestaltung einer gesamtblütnerromanischen Schriftsprache Rumantsch Grischun* (Coire, éd. Lia Rumantscha) du professeur Heinrich Schmid. Je n'insiste pas ici sur les principes et sur les aspects pratiques de l'élaboration de cette nouvelle langue, qui ont été souvent présentés ces dernières années. Pour une discussion sur les chances de survie du romançhe, l'histoire de son développement et de son acceptation me semble plus importante. Le RG est né pour répondre à un impératif politique: dans les relations officielles, le problème qui se posait au début des années '80 était: *un seul romançhe ou pas* de romançhe. Le principal but de la nouvelle langue était de remplacer l'allemand dans l'emploi écrit et la vague de demandes de traductions en RG faites à la Lia Rumantscha peut donner confiance aux promoteurs de la langue unifiée. Deux ans après la parution du premier dictionnaire et de la première grammaire RG (Darms, Dazzi, Gross 1985), la Confédération a établi que les traductions officielles pour les romanches

soient faites dès le 1 janvier 1987 en *RG*. On essaie maintenant de faire paraître le premier quotidien romanche, *Quotidiana*, partiellement ou entièrement en *RG*; le premier numéro expérimental est paru en 1988, le deuxième en 1992.

Trois enquêtes – effectuées par l'université de Mannheim en 1987 (Diekmann 1990), par le journal *Bündner Tagblatt* et le *Radio Rumantsch* en 1988 – ont montré une attitude positive d'une grande partie de la population (dans le cas de la première enquête il s'agissait des *leaders* d'opinion du monde rural) envers le *RG*. Y adhèrent sans réserve surtout les habitants des régions où le romanche a une position très menacée par l'allemand. De l'autre côté, un courant d'opinion contraire au *RG* s'est formé, notamment dans la Surselva catholique, qui aimeraient imposer comme langue unique le sursilvan. Les adversaires du *RG* invoquent le manque d'unité du romanche, en soutenant que le sursilvan et le vallader représentent deux langues, et non des dialectes; leur deuxième argument est que, en tant que langue artificielle, le *RG* n'aurait pas le droit d'être adopté comme langue officielle; on arrive parfois jusqu'à demander un procès contre le *RG* au tribunal international de La Haye... Le point culminant du conflit interne des romanches a été marqué en janvier 1992, quand une pétition contre le *RG* signée, d'après les organisateurs, par à peu près 3 000 personnes, a été déposée à Berne. Derrière cette opposition se cachent des intérêts politiques et c'est très difficile de prévoir quel sera le sort du romanche, qui se joue entre la politique tout court et la politique linguistique.

5. NOTES

- (1). La terminologie utilisée dans tous les types d'ouvrages n'étant pas unitaire, j'emploierai (*le*) *romanche* pour la langue et (*les*) *romanches* ou (*les*) *rhéto-romans* pour ses parlants.

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**LE FRANÇAIS, LANGUE MENACÉE AU MANITOBA?
ÉVOLUTION DU VOCABULAIRE DISPONIBLE
(1963-1991)**

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1. INTRODUCTION

La mesure de la disponibilité lexicale est une méthode d'analyse quantitative du vocabulaire qui se classe parmi les autres études effectuées en lexicométrie: fréquence, rang associatif, répartition et valence. Après une rapide description de cette méthode, son rôle dans l'évaluation d'une langue minoritaire sera traité à l'aide d'exemples extraits de deux synchronies (1963 et 1991). La langue analysée est le français, langue maternelle de 5.1% de Manitobains (55 700 locuteurs en 1991).

2. LA MÉTHODE

2.1. Origine et description

L'enquête de disponibilité lexicale, mise au point par Michéa (1949, 1953), permet de dresser l'inventaire des mots disponibles (les lexies les plus utiles d'une langue) et de les classer par centres d'intérêt (thèmes), selon l'ordre décroissant de leur indice de disponibilité: «Un mot disponible est un mot qui, sans être particulièrement fréquent, est cependant toujours prêt à être employé et se présente immédiatement et naturellement à l'esprit au moment où l'on en a besoin. C'est un mot qui, faisant partie d'associations d'idées usuelles, existe en puissance chez le sujet parlant, dès que ces associations entrent en jeu» (Michéa 1953 : 340).

Les centres d'intérêt sont généralement au nombre de seize, et les témoins ont de dix à douze ans (locuteurs d'une langue encore dénuée d'interférences avec des vocabulaires spécialisés). Ils disposent d'un temps limité (quinze minutes, par exemple) pour écrire tous les mots leur venant à l'esprit sur un seul thème.

L'indice de disponibilité de chaque lexie se calcule en divisant 100 par le nombre de témoins, puis en multipliant ce résultat par la fréquence d'une lexie. Quoique le support matériel consiste en fiches

remplies par écrit, la distinction entre écrit et oral n'est plus pertinente. Ces lexies thématiques sont des noms communs, concrets et usuels, d'une grande stabilité (contrairement aux mots fréquents).

2.2. Buts et synthèses

D'abord recherchés dans un but didactique (l'établissement du lexique fondamental), les indices de disponibilité ont vite acquis d'autres usages: instruments d'appoint pour les lexicographes, révélateurs de réseaux associatifs, etc. Ils peuvent aussi permettre de mesurer le degré de recul ou de résistance d'une langue en contact avec une autre: basaa et français (Njock, 1979), wolof et français (Fall, 1976), français et anglais au Manitoba.

2.3. Analyse des données

Les précautions à prendre lors de la saisie des données sont différentes mais tout aussi nombreuses que lors de l'enquête de terrain: déchiffrage correct, regroupement des variétés morphologiques d'un même concept, reconnaissance des chaînes vocaliques, etc.

Une analyse informatisée peut donner, pour chaque thème, le total des occurrences et celui des lexies différentes, total global ou ciblé sur l'un des paramètres retenus: âge, sexe, classe, type d'école (française ou d'immersion), lieu (rural ou urbain) et langue parlée à la maison. C'est au niveau du classement global ou fractionné que s'effectue l'analyse des anglicismes et des régionalismes de type archaïque ou dialectal (Rodriguez, 1984).

3. LE FRANÇAIS AU MANITOBA

3.1. Les enquêtes

Dulong (1963) a mené la première enquête, et j'ai moi-même réalisé la seconde, dans un parallélisme minutieux: mêmes écoles (8 sur 10) et conditions d'enquête (centres d'intérêt, durée, etc.). Le nombre des témoins a doublé (de 228, il est passé à 427) sans que cela affecte la validité des résultats. Les indices cités ci-après pour 1991 proviennent de résultats partiels (le nombre total de lexies dépasse 150 000).

3.2. Exploitation diachronique d'une synchronie

Fondée sur les résultats d'une seule enquête, une étude des synonymes fournit déjà quelques indications sur la confrontation français-anglais (en 1963, chandail est au rang 16 avec un indice de 29.2%; sweater au rang 34, avec 16%), et sur le rapport français régional-français normatif (en 1963, le régionalisme archaïque costume de bain était au rang 78 avec 5.4%, son synonyme normatif maillot de bain au rang 87, avec 4.2%).

D'autre part, le nombre respectif d'anglicismes et de régionalismes suggère une relation entre ces deux

sortes de lexies. En 1991, on trouve 5 anglicismes et 10 archaïsmes parmi les 40 vêtements en tête de liste. Parmi les 40 premiers moyens de transport, il y a 11 anglicismes et 2 archaïsmes. Toutefois, seule une deuxième enquête permet de vérifier si l'un des synonymes remplace l'autre et si le rapport inversement proportionnel anglicismes-archaïsmes se confirme.

3.3. Étude diachronique (1963-1991)

Après une étude synonymique similaire pour 1991, l'évolution se précise: le mot sweater (rang 26), avec un indice de 21%, s'est considérablement rapproché de chandail qui garde un fort indice de 31%. Quant au régionalisme costume de bain, il n'apparaît plus dans les 40 premiers mots, remplacé par maillot de bain (31%). Un synonyme anglais (sweater) a gagné du terrain alors qu'un synonyme français (costume de bain) a disparu. Le tableau suivant est un échantillon des résultats partiels pour «Les vêtements», en 1991. Les rangs pour 1963 sont entre parenthèses et les écarts avec les indices de 1963 sont indiqués par + ou -.

1 (1)	bas	93%	- 10.7
2 (6)	manteau	88%	+ 4.1
3 (2)	chemise	83%	- 17.0
4 (3)	souliers	81%	- 12.3
5 (13)	pantalon	76%	+ 33.6
6 (4)	robe	76%	- 16.4
7 (38)	tuque	76%	+ 61.9
8 (14)	bottes	74%	+ 37.7
9 (22)	mitaines	64%	+ 43.8
10 (5)	chapeau	54%	- 32.7
11 (9)	jupe	40%	- 19.4
12 (56)	foulard	38%	+ 29.6
13 (8)	blouse	36%	- 28.1
14 (15)	gants	36%	- 0.3
15 (69)	sous-vêtements	36%	+ 29.0
16 (0)	culotte courte	33%	+ 33.0
17 (16)	chandail	31%	+ 1.8
18 (87)	maillot de bain	31%	+ 26.8
19 (12)	ceinture	29%	- 15.2
20 (7)	culotte	29%	- 48.3
21 (158)	jeans	29%	+ 28.1
22 (50)	brassiere/bra*	24%	+ 14.1

* anglicisme non lexicographié

Citons en deuxième exemple, le cas des mots camion et truck. En 1963, le mot français se trouvait au 7^e rang avec un indice de 58%, et le mot anglais au 14^e rang, avec 25.3%. En 1991, le mot anglais s'annonce désormais comme le plus disponible des deux: il apparaît, pour l'instant, au 6^e rang avec un indice de 65% alors que camion a reculé au 14^e rang avec un indice 48%. Il y a pratiquement eu échange de rangs entre ces deux mots, le mot anglais accusant maintenant

un indice extrêmement élevé.

Quant au rapport anglicismes-archaïsmes, les résultats de 1963 montrent 2 anglicismes et 10 archaïsmes parmi les 40 premiers vêtements, et 2 anglicismes, et 4 archaïsmes parmi les 40 premiers moyens de transport. Ceci semble indiquer qu'une perte des archaïsmes favorise un accroissement des anglicismes. Enfin, l'analyse typologique des effets interférentiels (anglicismes sémantiques, morphologiques, phonétiques, etc.) montre les divers mécanismes de l'évolution d'une langue minoritaire.

4. CONCLUSION

L'étude finale entre les deux séries complètes d'indices de disponibilité (1963 et 1991) donnera la mesure de l'appauvrissement ponctuel ou global de chaque champ lexical traité (par des comparaisons portant sur le total des occurrences, sur celui des nouvelles occurrences, sur l'augmentation ou la diminution des indices). L'étude sur les synonymes et le rapport anglicismes-archaïsmes précisera la dynamique qui préside à l'avancée des anglicismes ou à la survivance des régionalismes-archaïsmes pour certains thèmes. A l'aide des indices de disponibilité lexicale, on peut ainsi mettre en relief les mécanismes sémantiques et morphologiques d'une langue en contact avec une autre, donc aussi les mécanismes de défense d'une langue en état de survie.

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LANGUAGE SURVIVAL, REVIVAL AND TYPOLOGY THE CASE OF HEBREW

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While a characterization of Hebrew as an "endangered" language would validly apply, if at all, only to the situation prevailing before World War I, it may be safely assumed that a comparison between the situation of a re-vival (as it took place in the case of Hebrew) and that of a sur-vival (of an endangered language) will show a certain parallelism; in both cases the process necessarily takes place in the framework of a community using languages altogether different typologically, and since in either situation of this kind the speakers are never unilingual (in the "endangered" language, they are forced to form their expression in the mould of a categorial system foreign to the language whose life is being "saved").

As a consequence, the phenomena observable in the diachronic changes which occurred in the transition from the heritage of Classical Hebrew to currently used Israeli Hebrew and those encountered during the process of preserving an endangered language are analogous in the area of typology, and their study may be very advantageous for whoever wishes to devise a practicable and, at the same time, scientifically sound procedure for language "preservation". For the purpose of describing such phenomena it is most expedient to use a concept of structural "typology", by which a typological feature expresses itself in the application of a given type of distinctive means of expression to a certain signified function; such a concept very likely reflects the mental process of conceiving the relation between a "basic" and an "modifying" notion (i.e., whether the latter is inherent in, or additional to, the former). E.g., the trivial fact that syntactic-grammatical nominal functions are distinguished in Latin by affixes and in English by the order of components; and inversely, that the order in components exerts in Latin a function on the enunciative level, while English resorts for that purpose to complicated mechanisms of syntactic decomposition, such as clefting. In Biblical Hebrew many processes of grammatical-transformational stem-formation, such as the derivation of a verbal

noun from its basic verb or adjective, are effected by means of affixless, so-called "internal", i.e. base modifications (*gādōl* "great" → *gōde* "greatness"), while, e.g., in Contemporary French the same functional relation would find its materialization by an affixal means of expression (*grand* → *grandeur*).

In a plurilingual setting, a language may undergo processes, by which some of these applicational relations are shifted to new positions to be in keeping with the correlations prevailing in a language which occupies a position of model or canon for acculturation and relational and categorial classification of concepts.

For Israeli Hebrew, that position was held by different idioms at various stages of the history of revival: 1. French, as the prestige language of civilization of Oriental (Sephardi) communities established in the country before the turn of centuries; 2. Russian during the period of the so-called "Pioneer" immigration until the late twenties; 3. Yiddish (typologically preponderantly German) from that period until the forties; 4. some type of "General (intellectual) European" essentially represented by German from the thirties onwards and by some Americanized European features to the present.

Typological features inherent in all of the named model language types are, of course, the most stable ones: thus, for the example given above, the abstract of "great" is of a suffixal formation (*gadl-at*); the old formation survives, but does not retain its function and is reduced to serve as a *vox media* "size". There are numerous morphological as well as semantic examples of that fully productive type.

A feature of twofold French origin (by typology as well as by materialization) is the now only productive affixal formation of diminutives, which replaced an affixless derivation by internal reduplicative modification of the root: *kélev* "dog" → *klavlav* "doggie". The new pattern which used the Classical suffix *-an* adapting it to the novel use, was inspired by the homophony of the latter with the French diminutive suffix *-an* and is known to have been first used in the nursery hypocoristic *dub-an* "teddy-bear" ← *dov* (stem *dub-*) "bear", calqued by speakers who used Fr. *ours-an* in nursery language. While this derivational suffix is in widespread use, it did not encroach upon the range of the Biblical use of the reduplicative pattern, which is used for "moderate" adjectives, e.g. Biblical *yārōq* "green" → *yraqraiq* "greenish"; it is probably due to the fact that there is no common European pattern for this purpose in average registers and that "moderation" was not conceived as an "additional" feature of qualities, that for this function the old affixless means of expression remained in force to the exclusion of all affixal patterns: *xamuc* "sour" → *x^amacmac* "sourish".

A categorial feature which passed from one model to another is the gradation of adjectives: relativized statements of qualities was in Classical Hebrew, and still is in many Semitic languages, possible only syntactically, the "norm" of the quality necessarily being stated: isolated *gādōl* functions as "positive", with added *min-* "from, than"

+ sg. noun as "comparative", and with added *b-e-*"in, amongst" + pl. noun as a "superlative"; the adjective underwent no morphological modification. At the first period of revival an affixal model was stabilized, which rendered the addition of the "norm" noun superfluous and functioned according to the French model: *yoter¹-gadol²* "plus¹ grand²", *ha¹-yoter²-gadol³* "le¹ plus² grand³". This model, inconvenient because of its inability to express a determinated comparative, was subsequently replaced by a Russian-German model with different affixes for the comparative and the superlative: *yafe* "schön, красивый", *yoter¹-yafe²* "schön¹er², красивее¹", *ha¹-xi-yafe³* "der¹ schön³ste², красивейш²ий¹. An elative *yafe-beyoter* "especially nice" may serve, in its determinated form, as a collateral periphrastic superlative, according to the Russian model: *ha-yafe¹-beyoter²* "самый² красивый¹" as a consequence, *ha-yoter-yafe* changed its purport to "the nicer one".

A German-inspired typological change, which increased its vigour and domain of use in the present century, hails already from Hebrew literary language used in Germanophone host-countries since the 18th century. While following the pre-Biblical loss of "mood" as a morphological category, the monolectic "irreal conditional" contrasted in Classical Hebrew the *modus realis* syntagmatically, rather than morphologically, it took periphrastic shape through inspiration by the periphrastic form of the German modal *ich würde gehen*, viz. *hayiti* (lit. "I was") *holex* ("going"). This construction is, however, very common in Post-Biblical Classical Hebrew in a consuetudinal sense ("I used to go"), and both applications coexist in current language, only syntactically and occasionally contextually distinguishable.

The most conspicuous typological characteristics of present-day Hebrew are those which cannot be ascribed to a single model language, but rather to Pan-European modes of expression, principally on the educated level, which by themselves are the well-known results of the typological convergence of European languages ("*abendländischer Sprachausgleich*", Werner Betz), which profoundly reshuffle the structures of languages partaking in it, more often than not contrary to their historical heritage, as is the case for Slavic idioms, but also for Romance ones under the influence of Greco-Latin patterns. These features, having taken root in Israeli Hebrew, clearly assign to it its place in the "European-Occidental" area; we must expect perfectly analogous events to occur in the structure of any language whose life is "saved" in a general framework of Occidental civilization, and language planners active in that respect will be well advised to devise formal tools and mechanisms for the absorption of these typological features in the structure of the language dealt with.

The most conspicuous features of this sort appear to be:

1. Ancient formations expressing inherent qualities are reapplied to match Pan-European admissive participles of the *-ab/e-* type (*raxic* "wash-able").

2. New types of compound adjectives are created, all patterned on formation types taken over, by European languages, from learned Latin and extremely productive so that they can no longer be listed in dictionaries:

A. adjectives for circumstantial and descriptive predication: *ta¹-yam²-i³* "sub¹-mar²-ine³";

B. adjectives for description by inherent quantitative characteristics: *du¹-xods²-i* "bi¹-month²-ly³".

In these categories, the initial component is normally of Aramaic origin (the "learned" layer of Jewish tradition), as it is – as in the examples exhibited – of Greek or Latin origin.

3. A large number of new prepositions are formed of a conglomerate of a prepositional noun as head of a "genitival" syntagma (*mi-*"out of" + *siba*—"reason" -*t*"of" – "à cause de").

4. The Hebrew syntactic categories have undergone a decisive typological change:

A. The order of the sentence-components, which in Biblical Hebrew was determined at the enunciative level, the sentence opening with the rheme, is now determined, like in German or Russian, at the grammatical level, the grammatical subject occupying a front position and the sentence proceeding to its more rheumatic segments ("functional sentence perspective"); in non-subordinated, non-interrogative verbal sentence the finite verb, contrary to pre-Israeli syntactic features, normally occupies the second position (cp. German, Russian).

B. On the other hand, a marked tendency toward the development of copula structures of sentences with non-verbal predicates has been blocked by Russian interference: in Israeli Hebrew copulaless nominal sentences are the rule in precisely the same conditions as in Modern Russian. A compulsorily copulaless verbal tense ("present") made up of an independent personal pronoun (*hi* "she") and a gender-number inflecting participle (*kore¹-t* "reading, fem.sg.") in normally not modifiable order stabilizes the not originally Semitic tripartite temporal system in Hebrew and is maintained due to its formal correspondence to the Russian tense formed the same way, however functioning as "past": она читала.

Since most of these typological features are not shared by living cognate languages, such as Arabic (which experiences considerable difficulties in expressing European concepts expressed in European languages by one of the constructional patterns we have mentioned) it is obvious that their emergence and expansion can in no way be the result of any diachronic evolution ("économie des changements"), but that they have grown out of the process of "revival", fertilized by culturally potent languages of different typological characteristics.

OMAHA LANGUAGE PRESERVATION: A STATUS REPORT

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Omaha is a Siouan language spoken in Eastern Nebraska. Though not yet in the dire position of having only one or two surviving speakers, it does have an ominously small and aging speech community. In this paper I describe the current state of the language, including the number and location of speakers, how and in what circumstances the language is used, language attitudes within the Omaha community, and reasons for the continuing decline in Omaha language usage. I also briefly discuss language renewal efforts and prospects for the future.

1. NUMBER AND DISTRIBUTION OF SPEAKERS

Omaha is spoken fluently by no more than 70 people and used in daily life by perhaps thirty elders residing in or near Macy, Nebraska. Thus a little over 1% of the total tribal enrollment of 5,227 (1990 census) are fluent speakers, and less than 1% converse regularly in Omaha. About 2,000 of the 5,227 tribe members live on the Omaha reservation: 1,212 in the village of Macy and 787 in the nearby towns of Walthill, Rosalie, Bancroft, and Decatur (1990 census); since disproportionate numbers of elderly people reside on the reservation the only real concentration of speakers is in this area, especially in Macy. There are groups of Omaha including at least two speakers of the language in the nearest cities, Lincoln, Omaha, and Sioux City, and many of the scattered Omaha come home for the annual powwow, so most Omaha speakers do have an opportunity to function as part of an active speech community at least once a year.

Few if any individuals less than 65 years of age are able to converse freely in Omaha: Omaha is at stage 7 in Fishman's typology of language loss. However, many middle aged people are semi-speakers or understanders. Most children know a few words, as a result of "culture classes" in the Macy school, even if they learn no Omaha at home.

2. OMAHA LANGUAGE USAGE AND COMMUNITY ATTITUDES

In spite of the diminishing number of fluent speakers, the Omaha language retains cultural importance: speeches and prayers are delivered in Omaha at Powwows, tribal council meetings, celebrations of highschool graduation or return from military service, religious services, and other ceremonial occasions, and those who are able to use the language in this way are honored for their skill. I have heard younger tribal officials apologize for their inability to offer a prayer in Omaha to open a meeting. It seems to be common practice to make a speech or conduct a ceremony in Omaha but then follow it with a translation or summary of what was said in English for the benefit of those who do not understand Omaha.

Some members of the Native American Church and others who practice

traditional Native American forms of spirituality feel that Omaha is the most appropriate language for religious purposes. One middle aged man who describes himself as "a follower of the pipe" explained to me that prayer and meditation ought to be done in "our own language"; he attributes his failure to achieve a vision partly to the fact that he can pray only in English.

In addition to its ceremonial functions, Omaha is still used for ordinary interaction, but only by a rather small group of elderly people. At the Senior Center in Macy, approximately 50 people assemble daily for lunch. Most of these are Omaha speakers, and some are more comfortable conversing in Omaha than in English. Although all Omaha speakers are bilingual, the oldest members of the tribe learned English later and use it less freely than later generations. The conversation switches between Omaha and English in varying proportions at various tables. Some elderly couples speak to each other in Omaha at home, at least some of the time, and one 90 year old woman I am acquainted with speaks Omaha with her daughter who lives in the same neighborhood. Those elders who do not have another Omaha speaker in the household and do not eat at the Senior Center have little opportunity to practice their linguistic skills.

Nearly all informal Omaha conversations include a sprinkling of borrowed English words and phrases, mostly terms for things that did not exist in the old days, but sometimes words for which there is a traditional Omaha expression. Often whole sentences or paragraphs in an otherwise Omaha narrative are in English. I discuss such code switching in more detail in work in progress. Speakers are aware of and sometimes apologetic about their use of English words. As is common with dying languages, speakers discuss and sometimes disagree over who speaks the "best" Omaha, and whether it is important to keep the language pure.

Community attitudes toward speaking Omaha are mostly positive, but often fatalistic. Elders sometimes make comments about the young not caring enough to learn "their own language", while many younger people say they wish they knew Omaha but are unsure how to go about learning it. Middle aged people sometimes feel caught in the middle: "My generation doesn't want this guilt trip, the older people saying we are the ones that let the language die."

3. LANGUAGE RENEWAL EFFORTS

The perception of Omaha language as an important link to traditional culture and the realization that younger generations are losing it have led to a variety of language renewal efforts. Attempts have been made to teach Omaha in the Macy public school at least since the early 1970s, and more recently also at the local community college and the Head Start program. Some written materials, including a dictionary, have been produced, Omaha speech has been recorded on audio and videotape, and several linguists have been involved to some degree. These efforts have been hampered by inconsistent financial and administrative support, lack of continuity, and sometimes lack of cooperation between the various people involved, as well as a shortage of trained teachers and appropriate teaching materials. But in spite of problems, some results have been achieved, and a core of tribal leaders remains committed to keeping the language alive.

The Omaha language program in the public school has usually consisted of brief oral language lessons conducted by untrained elders. Typically the children have been taught to count to ten, identify animals and common objects, and memorize some other vocabulary of cultural/historical significance, such as the names of the Omaha clans and some kinship terms. There has been little if any emphasis on achieving communicative competence (no verbs are taught, for instance), and although some bilingual story booklets have been printed, to the best of my knowledge the children have never been taught to read them or use any

of the existing Omaha orthographies. A dozen or so elders have been involved in the program through the years, as well as a few younger teachers and administrators. One of the younger people involved is a printer who formerly taught at the elementary school and who has been instrumental in producing nearly all of the available teaching materials for the language, both printed and taped. The public school language program is discussed in more detail in Rudin (1990).

Although the school program is not producing fluent Omaha speakers, it does boost awareness of and pride in the language. Most Omaha youngsters are familiar with at least some Omaha vocabulary, as a result of the program, and the materials that have been produced are potentially useful.

The Nebraska Indian Community College program has been similar in both content and teaching methods to that at the elementary school; the only major differences have been that instead of a ten or fifteen minute lesson every day, the college class meets for two hours or so one evening a week, and instead of being required of all pupils, the class is elected by an interested minority of students. Many of these students, according to a counselor at the college, have been disappointed in the amount of usable Omaha learned and especially in the amount of Omaha knowledge retained after the class was over.

Changes appear to be in the offing, however. In the most positive linguistic step I have seen in my four years of contact with the reservation community, a group including counselors from both campuses of the community college, the current Omaha language teacher, at least one and perhaps 2 linguists, and other concerned individuals has begun compiling ideas for a more effective curriculum. These include better use of written and taped materials, realistic use of the language in dialogue and role-playing situations, and some overt teaching of grammar. Such methods, while initially intended for use at the college level, will, I hope, also be adapted for use at the elementary school. The new curriculum will face several inevitable problems. One of the several competing orthographies, none of which is completely satisfactory, will have to be chosen, teachers will have to be trained and supported, and production of texts and audiovisual materials is likely to take some time. But since the project is supported both by the college administration and by the local community, it has a good chance of actually being implemented.

Meanwhile, linguists' work on recording and analyzing the Omaha language before the last generation of fluent speakers are gone is also moving forward. For many years the only sources of information on the language were text collections and fragmentary grammatical information compiled by the Reverend J. Owen Dorsey in the nineteenth century. Recently John Koontz of the University of Colorado has done considerable work on Omaha (all of it unpublished), including a nearly-completed dissertation on the phonology and morphology of the language. I myself have taped some twenty hours of Omaha speech of various styles and genres, and am concentrating on syntactic analysis.

4. REASONS FOR CONTINUING DECLINE

In spite of revival efforts, the Omaha language has lost a great deal of ground over the past several generations, and is still losing speakers. Seventy years ago virtually all Omaha children spoke Omaha as their first language, and Omaha was used for most communicative functions within the tribal community. Today children learn only a few words in school (in spite of the fact that many live in the same household with at least one fluent speaker), Omaha has very limited functions, and every elder who dies or becomes incapacitated means the language has one less speaker.

Several factors have contributed and are still contributing to the steep decline in Omaha language usage. One obvious factor, common to many tribes, is the

assimilationist pressure of the educational system. Many speakers in their 70s and older report being punished for speaking "Indian" in boarding school, and members of the next generation report that the older Omaha themselves discouraged them from speaking the Omaha language. One man in his 40s says "they told us we needed to learn English and get ahead, make something of ourselves. Our parents thought they would help us by not talking Omaha to us." Even today, Omaha language is allotted only a sometimes grudging 15 minutes a day at the Macy school and not taught at all in other reservation schools.

A second factor, increasingly, is intermarriage. At a recent meeting of the Tribal Council I asked the council members why they had not spoken Omaha to their children (or, for the younger members, why they thought their parents had not spoken Omaha to them). Three of the seven mentioned a non-Omaha spouse or parent (usually Native American but of a different tribe) as the major reason.

A third, less obvious factor is the differences between male and female speech. Men and women use different greetings, exclamations, address forms, and imperative markers. Although these linguistic differences are actually quite minor, they loom large in the popular conception of the language. Many people have explained to me that "women speak a completely different language", and men in particular are very wary of using "women's language". This becomes a problem for language continuity when teachers or models of the same gender are not available. A middle aged man explained to me why, although he understands Omaha, he does not speak it: "My mother and aunt always talked Omaha around the house and I can hear it in my head, but I don't want to talk like a woman." A woman told me her young son wants to learn Omaha, but not from a female teacher; since all of the Omaha language teachers in the public school are female this year, she feels the program there does him no good.

5. FUTURE PROSPECTS

Unless drastic changes take place in the very near future, Omaha will be extinct as a vehicle of everyday communication within the next generation. The ideal situation of children learning the language at home, while still possible in theory, becomes less and less likely as the surviving speakers increasingly are not the parents or even grandparents of the current generation, but their great grandparents, and as they increasingly tend to be in frail health, sometimes separated from the family in the local nursing home. Compiling as complete a record of the language as possible is thus urgent work. However, given the prevailing community attitudes, Omaha may well survive as a ceremonial language, in the form of memorized songs and prayers, and formulaic phrases to be used in public speaking. In addition, improved language classes in the schools and community colleges may permit the language to continue to be used somewhat more broadly as a badge of tribal identity and will make it possible for at least a few individuals to understand the recorded tales, songs, and other materials, both written and audio or videotaped, from previous generations.

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SURVIVAL OF CAMEROON LANGUAGES
REGRESSION IN A MULTILINGUAL URBAN SETTING

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1. INTRODUCTION. THE PROBLEM

The paper examines the dynamics of language regression in an urban community where groups of languages are in contact on an unequal basis. Empirical observation seems to point out to a regression of the use of national languages in Cameroon cities. The official policy of bilingualism lies at the basis of the regression. It favors French and English which replaced German as the language of the State after World War I, when France and Britain were granted trusteeships by the League of Nations to administer the German colony. Observations are centered on the capital, Yaounde.

2. FIRST SURVEY. EXOGAMY

Cities in Africa are the theater of violent disruptions of century-old patterns which are still predominant in rural areas. Endoethnic arranged marriages were still the rule a generation ago. They are decreasing. To measure the role of exogamy on language use, the survey focused on 2 types of marriages. Interviews were administered to 25 interracial and 25 interethnic couples who had resided in Yaounde since the early sixties or 1970. The sample was non-randomized. Most parents spoke mutually intelligible dialects - Ewondo, Eton Bulu, etc. - belonging to the Fang Beti group, whose speakers are found in neighboring Gabon and Equatorial Guinea as well. In the last two cases, they are the majority. Other national languages of the 50 families were Bakweri, Basaa, Bamun, Dwala, Fe Fe, Lamnso, Masa, Mbo, Mungaka, etc. Parents belonged to the 35-55 age bracket. Most families enjoyed a high socioeconomic status. Each had a minimum of 2 children; most had up to 4 or 5. Children were aged from 4 to 25. They lived with the parents and received some kind of tuition, from nursery-school to the university.

2.2. Speech patterns in interracial marriages

The father was the Cameroonian spouse; the mother was an American or a European. Results showed that in 90% cases, the language most frequently used was French even when the mother's first language was Spanish, German or Flemish. *None* of the children spoke the father's first language although they could sometimes understand a few isolated words or idiomatic phrases. For a fifth of the sample, the

common idiom of the parents was the official language of the country where they first met and determined the language used in the home. With one notable exception, none of the Cameroonian fathers used his mother tongue with the children. Language transfer can therefore be deemed complete and sudden in a single generation.

2.3. Speech patterns in interethnic marriages

The term interethnic defines homes where spouses - Anglophone or Francophone - belonged to different linguistic groups. Again, for one fifth of the sample, children spoke the mother's tongue rather than the father's. There was both transfer and maintenance of the African language depending on the parent considered. In many cases, transfer to the mother's language was predictable, the father himself being the offspring of an interethnic marriage. Less frequently, double maintenance occurred and both father's and mother's tongues were used in the home. However, in 71% cases, neither the mother's nor the father's tongue were used. Instead, speakers used one of the two official languages.

Exogamy is therefore a strong factor in language transfer and regression. The phenomenon may exist on a wider scale. As related by an informant, a Canadian teacher at the University of Libreville for 5 years, in the Gabon capital, most parents from different linguistic backgrounds use French instead of African languages in the home when talking to each other or their children.

3. SECOND SURVEY. GENERATIONAL REGRESSION

The role played by urbanisation and immigration in the regression process was even more striking. The next sample included 10 Fang Beti families belonging to 4 generations from the great grandparents - 85 years - to the great grand-children - from age 4 upwards. They formed an extended family of about 100 individuals. All were city residents. They enjoyed a high socioeconomic status.

3.1 First generation of urbanites

The great grand-parents functioned with a three-tiered wide-spread individual multilingualism. It was not unusual for a speaker of this generation to speak more than 5 languages on top of his own, pidgin-english, other native pidgins like Mongo Ewondo and a European language. Males outnumbered females in the last case. The mode of acquisition was written as well as oral for the mother tongue and the official language - German later replaced by French -, but only oral for the pidgins and other national languages spoken as second languages. Members of this generation were the first to experience life in a multiethnic and multiracial society after the creation of administrative centers by the German. The social fabric of villages around the towns remained basically untouched, and the first native immigrant civil servants from other parts of German Kamerun who assisted in the *Pax Germanica* evolved in a monolingual Fang Beti speech community: they learned the local majority language. Naming is a strong social indicator in Africa. Unlike Western culture where an individual has 2 or 3 names, the Fang Beti society practises multiple naming. A Beti has a first name, his mother's name since the society is patriarchal and matriarchal, an ancestor's name, a

surname, a talking-drum name, a plea name and, for male children, an initiation name for the *So* rites. Speakers of the first generation and their pairs knew and used all these names. The names least used were the European ones which were German then French.

3.2 Second generation of urbanites

The number of national languages spoken in this generation has dwindled. The typical speaker was born under the trusteeship and was well into adulthood at Independence. The French carried out an offensive educational policy designed to produce an elite entirely devoted to French culture and arising from the entrenched belief that France was entrusted with a universal mission to civilize mankind. This policy was effectively destructive for the community societal structures. National languages were no longer taught in schools as during the German colonisation. A fragile nook was reluctantly granted to them within the narrow frame of catholic and protestant mission schools. The number of females speaking the colonial language increased. However, females remained more multilingual in the national languages than males, a feature that closely mirrored the absence of opportunities and formal education or training for women in the new urban context and the consequent stark differences in urban career choices. Yet, schooling and exchanges still took place in the villages which remained important monolingual social anchors for the second generation of urbanites. Acculturation therefore was not total. As to naming, one should note that the use of the husband's name preceded by «Mrs» when addressing married women started with this generation, a rare trait in the first generation of urbanites where married women kept their maiden name as they did in the traditional Fang Beti society.

3.3 Third generation of urbanites

Speakers of this generation could only speak one national language: their own which most learned before the colonial language. They are the products of the *linguicide* planned by the French administration through various legal texts as early as the 1920's. Interestingly, none of the speakers truly experienced colonisation. In fact, most were born after Independence. They had not really lived in villages although the parents' original villages remained a potent rallying ethnic factor. The usual medium of communication was French even among siblings. They were dominant in French when dealing with certain subjects. Unlike the first two generations, they could not read nor write their mother tongue. French even tended to replace the mother tongue as the language of religion. Urban space had expanded and undergone drastic alterations. A new native immigration had taken place engulfing surrounding villages which used to lay outside the town. Immigration now principally consisted of below-the-poverty-line villagers in search of a better life. These peasant-city dwellers are crammed in linguistically self-contained urban ethnolinguistic mini-villages within the larger African metropolis. Yaounde has more than 100 national languages. Immigrants no longer needed to be multilingual: the town has become multilingual. The official medium is now the lingua franca of the city. Being transethnic, it covers a far larger spectrum than any national language. Christian names were used almost exclusively. The

use of other names was restricted to traditional ceremonial occasions such as ethnic courts, mourning or marriages, which led to split identities. Sometimes, due to the French Napoleon Code, the name-giving is confusing: girls are found with male family names and boys with female family names. Such features were not limited to Christians. Because it was their father's names, Fulani females of Moslem denomination were found with names like Miss *Abdulaziz* or Miss *Wadjiri* usually given to male children.

3.4 Fourth generation of urbanites

The survival of Cameroon national languages is most crucial in this post-independence generation and the battle may well be in the process of being lost. Speakers were early bilinguals (mother tongue/official language). Competence in the national language was mainly audio-receptive, and French almost the exclusive medium. The national language was limited to grand-parents, houseboys, gardeners or nannies, which imparted an undesirable inferior status to it. Immigrants are now the majority (at least 8% of the population in all Cameroon towns, Yaounde included). The name most familiar to the children was their European name.

4. CONCLUSION. THE ROOTS

Language transfer in urban centers can be sudden or gradual for speakers of higher socioeconomic status. The roots of the regression should be traced to the imbalance which is the principal nexus of the relationship between national languages and European languages: Although they benefit from the speakers' allegiance, they lack the prestige acquired through use in the official institutions. They continue to be excluded from the formal education system just as during the French trusteeship. Moreover, their knowledge is irrelevant to career choices. Even M.A or PhD theses on national languages are in English or French. Newspapers, books, films or theater performances in the national languages are as scarce as the readership or audience of such productions restricted to a rare breed of research scholars in Cameroon and abroad. They get little radio broadcasting and are excluded from television. Their use by the legislature is non-existent. It is desultory in the judiciary with the result that citizens are tried in a language they little or do not understand. Though they could be used to enhance the effects of social, medical and economic development programs, they have been constantly denied inroads in fields such as advertisement and industry. The imbalance is government-supported: the pervading fear is that any other course could be mistaken as an attempt to favor some national languages rather than others and consequently fuel ethnocentric forces that could endanger the cohesion of the nation-state. The statu quo is deemed a far more desirable policy.

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INTERIM REPORT ON WIYOT LEXICON

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As a graduate student in linguistics at the University of California, Berkeley, in the 1950s, the writer had the opportunity to do linguistic field work with Mrs. Della Prince, the last living speaker of the Wiyot language, spoken in the Humboldt Bay area of northern California about three hundred miles north of San Francisco. Wiyot and its neighbor Yurok were the two languages Sapir used to upset the staid world of linguistic anthropology when he pointed out in 1913 that they were related to the great and widely-distributed Algonquian family of languages (Sapir 1913). During the 1950s a number of students in the Berkeley linguistics department were engaged in doing field work, under the auspices and supervision of the Survey of California and Other Indian Languages. The expectation was that a comprehensive description according to the Boasian model, that is, a grammar, dictionary, and texts, would be completed as a requirement for the Ph.D. In the event this writer can think of only two colleagues who succeeded in fully meeting this requirement; he himself fell by the wayside with the majority and wrote his Ph.D. dissertation, later published as Teeter 1964, as a grammar and texts of the language. Following this, during a thirty year teaching career he was unable to find time to complete the dictionary, until finally he accepted early retirement in mid-1989 for the express purpose of pursuing this important research. It is being carried out in two phases. Since the most immediate and pressing need was a

lexical index to Teeter's published work, in phase I he set out to produce this, based on a concordance of the published texts. With the aid of a grant from the National Science Foundation and in collaboration with Professor John Nichols of the University of Manitoba the concordance was finished last year, and the product of Phase I, called *Wiyot Glossary*, has now been completed, based on 11,563 database records, and is in process of being submitted for publication in the University of California Publications in Linguistics series.

Much material remains on Wiyot, however, first of all in Teeter's corpus of field notes and tapes. In addition to this one other major project of field research was carried out on Wiyot, by Gladys A. Reichard, a student of Franz Boas (Reichard 1925), and a few odds and ends of material were collected by others. Reichard's field notes were deposited with the California Survey, and Teeter has a copy in his possession. Phase II of the Wiyot lexical project will then proceed from the glossary to incorporate everything else known to have been recorded on the language, and is expected to result in a comprehensive lexicon by the end of 1995. Teeter is now submitting a new proposal to the National Science Foundation for support of Phase II. The final lexicon will differ in another way than sheer scope from the glossary as well, in that it will attempt to be an index of morphemes to the extent that morphological analysis is possible, whereas the glossary is based on citation of full forms.

The secret to doing this research has proven to be the pioneering work of Nichols on programs and routines for compiling dictionaries on the personal computer, using standard commercial database software. Database records are an excellent standin for the traditional 3"x5" slip, and Teeter has further learned that they may be produced much faster than the handwritten slips which were his previous materials. Completion of the final *Wiyot Lexicon* by the end of 1995 now seems to be a highly realistic goal.

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ASPECTS SEMANTIQUES DE L'ASSIMILATION
LINGUISTIQUE

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1. INTRODUCTION

Le processus d'assimilation linguistique est un phénomène somme toute banal. S'il équivaut à un traumatisme psychique pour les personnes concernées, il demeure pour le linguiste un sujet fort intéressant.

Penchons-nous sur quelques extraits de poèmes d'A. Weckmann, auteur alsacien né en 1924, écrivant dans les 2 langues (alsacien / allemand + français).

Passer, sous la contrainte, d'une langue à l'autre concerne tout particulièrement la sémantique et principalement les rapports de synonymie au niveau des signifiants concurrentiels en milieu de confrontation linguistique. Le sujet se complique d'ailleurs lorsqu'une des langues est à deux composantes (dialecte / langue standard). S'agit-il de bilinguisme, trilinguisme ou diglossie, voire "bilinguisme colonial" (A. Memmi)? L'un des poèmes "haimet" qui sera lu en intégralité est écrit principalement en langue française, car il est destiné à une jeunesse qui, la première, n'a connu que les écoles unilingues françaises, ce qui aboutit à une situation paradoxale qui veut que la langue régionale soit défendue en langue française, comme le français l'avait été en langue allemande il y a une génération dans le même pays. Ce poème évoque donc la disparition de la langue des Alsaciens, donc du soi-disant bilinguisme actuel. Il faudrait peut-être redéfinir ce concept: le bilinguisme alsacien n'est-il pas en fin de compte tout simplement une étape intermédiaire d'un unilinguisme à un autre? Cette thèse est en tout cas défendue par les Tyroliens du Sud qui, de peur de partager le sort des Alsaciens, rejettent tout bonnement les écoles bilingues (les écoles y étant soit allemandes, soit italiennes), leur cauchemar étant ce qu'ils ont appelé "Verelsässerung", c.à.d. "alsacianisation", un phénomène de désintégration de la langue maternelle au

profit de la langue dominante (la langue de l'Etat). Dans cette optique nous aboutirions en Alsace au schéma suivant:

allemand -) allemand + français -) français
unilinguisme -) bilinguisme -) unilinguisme ou alinguisme "frallemand" ?

En Alsace la population n'est bilingue qu'en apparence. Il y a bilinguisme chez un certain nombre d'individus alors qu'il y a diglossie au niveau de la majorité des gens: la langue parlée étant l'alsacien la langue écrite généralement le français. Le prochain stade sera-t-il l'unilinguisme français ou le "frallemand", idioème romano-germanique à l'image de l'anglais moderne ou un retour à l'allemand standard...?

2. ESQUISSE D'ANALYSE SEMANTIQUE

Dans le poème, l'alsacien fait figure de relique. Deux stades sont décrits: le passé, "la langue archaïque", le présent, la langue des enfants dressés à la nouvelle école. Nous nous trouvons en face d'un glissement au niveau du signifiant français, dans le meilleur des cas, en sens inverse (avec intercalation du signifié)

parents:	noix	-)	nuss	
	blé	-)	waisse	-) signifié
	raisin	-)	drîwel	
	signifiant indirect signifiant direct			
enfants:	(dont la langue maternelle fut étouffée)			
	noix	-)	-)	nuss
	blé	-)	signifié	-) waisse
	raisin	-)		-) drîwel
	signifiant direct		signifiant indirect	
	(ou premier)		(ou éventuel)	

Ce processus nous dévoile les bouleversements pouvant intervenir au niveau "signifiant / signifié".

Parents et enfants ne réagissent plus de la même manière, ils n'ont plus la même sensibilité sémantique. On voit que les parents ont besoin d'une étape supplémentaire pour parvenir au signifié visé quand ils entendent la suite acoustique correspondant à la suite graphique "noix". Ils n'y ont pas accès directement. Nous comprenons mieux à l'aide de ce schéma la différence entre langue première et langue seconde, bilinguisme (diglossie) à dominance alsacienne ou française. Les uns passent du signifiant français au signifiant alsacien pour seulement ensuite atteindre le contenu, c.à. d. la notion de noix, alors que les autres passent plus ou moins facilement d'un signifiant français au signifié (quelque peu "ombragé" de signifiant alsacien).

Cet état de fait est une explication d'une certaine lenteur de locuteurs alsaciens en français comparés à d'autres.

Un autre aspect intéressant en sémantique est la synonymie. Comment se présente-t-elle en milieu bilingue (de diglossie)?

waisse = blé blé = waisse? [blé] = [vaise] ?

Au niveau du signifiant neutre, oui. Il y a en effet identité de signification. Nous avons là affaire à deux suites graphiques et phoniques de surface (axe syntagmatique dans deux langues différentes).

Par contre, au niveau du signifié affectif qui correspond à des structures profondes sémantiques (axe paradigmique), il ne peut s'agir de synonymie (ce qui ne veut pas dire que certains individus ne soient pas capables en Alsace d'utiliser dans une phrase "blé" et dans la suivante "waisse", de quoi "désaxer" nos axes, mais ceci est un autre problème particulièrement complexe, celui du "code-switching"). Le mot français sera même ressenti à la limite comme un intrus, extrait d'un langage artificiel se bornant à un signifiant, c.à.d. une forme vide de sens, une abstraction difficilement accessible. "blé" sera un mot "concret" pour un francophone, "abstrait" pour un germanophone. Des bêquilles linguistiques seront donc nécessaires. Le poète fait d'ailleurs allusion à cette situation ambiguë lorsqu'il écrit:

" ... tu n'es plus qu'un mot

Alsâace Alsâace

mot creux dont on prend plein la bouche"...

Le problème de la prononciation des patronymes (et toponymes) dans notre petit pays relève aussi du domaine de la synonymie.

Que penser en effet de l'apposition?

Schneider = Schneider?

[ʃnaɪðər] = [ʃnɛdər] ?

Il est clair qu'il y a une déviation acoustique (niveau du signifiant oral) qui entraîne elle-même un déplacement au niveau du signifié.

Chnaidaire ≠ Schneider

Strasbourg / Kehl (ville frontière)

"Chnaidaire" n'est plus "Schneider", il y a refus conscient, mais plus souvent inconscient d'identification, mais "Chnaidaire" n'est pas non plus (ou pas encore) "tailleur". Nous nous trouvons de nouveau dans une situation ambiguë (ou intermédiaire).

Le signifiant originel a perdu son correspondant, il a perdu son signifié et référent en route, il ne signifie donc plus rien, le stade de l'aliénation linguistique est atteint, celui de l'assimilation totale est tout proche. D'ailleurs le poème ne se termine-t-il pas par:

"... que me veux-tu
étranger?"

3. CONCLUSION

Il serait peut-être intéressant d'étudier le rapport "langue / parole", c.à.d. "système linguistique / discours actualisé" auquel est fait également allusion au cours du poème. Là aussi nous avons assisté à un certain glissement. Le dialecte alsacien est de moins en moins "langue", il se désagrège (coupé du tronc commun germanique) pour ne survivre qu'en actes de paroles isolés (résistances sporadiques d'individus). Le français étant maintenant institutionalisé en Alsace, l'alsacien "langue" (au sens saussurien) disparaît lentement en tant que système, en tant que source commune pour végéter au stade de plus en plus individuel et de plus en plus rare de "parole". Une langue populaire sans peuple se dépeuple, c'est alors que nous évaluons l'énorme fossé qui sépare le véritable bilinguisme du poète de la diglossie dépréciée d'un peuple en perdition. Dans le poème "haimet" (petite patrie), et pour parler comme Roland Barthes qui comparait les signes linguistiques à des pièces de monnaie, les devises françaises n'ont pas cours au marché des changes affectif alsacien.

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HEZHEN: A DYING LANGUAGE IN CHINA

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This paper is a descriptive study of the state of Hezhen, a minority language that is on the verge of extinction in China.

1. HEZHEN PEOPLE AND THEIR LANGUAGE

Hezhen is the smallest of the fifty-six nationalities in the People's Republic of China. Its current population is about 4200. The Hezhen language belongs to the Manchu-Tongusic branch of the Altaic family. Like its sister languages, Hezhen has a highly developed system of agglutinative suffixes. The vowel harmony that characterizes all Altaic languages is also observed in its sound system.

2. THE DECLINING STATE OF HEZHEN

Surrounded by Han (the largest nationality in China) for centuries, all Hezhens have learned Chinese and use it as a means of communication not only with Hans, but also among themselves. The sociolinguistic investigation of Hezhen which was conducted during 1986 and 1987 by Zhang, etc. shows that the number of Hezhen speakers is decreasing. At present, the only fluent speakers of Hezhen are a dozen old people. It is no exaggeration to say that the Hezhen language is on the verge of extinction.

2.1. Methodology of the investigation

During our field work, accompanied by an interpreter, we visited 43 Hezhen households randomly chosen from two Hezhen settlements. We chose 123 Hezhen persons from different age groups as our informants. The statistics were gathered by combining our observations and the self-evaluations of the informants. Their proficiency at Hezhen is divided into four levels: NIL for those who could not speak it at all or those who could at most speak a few Hezhen words; POOR for those who could only say a few Hezhen sentences; GOOD for those who could express themselves sufficiently in Hezhen; and EXCELLENT for those who could speak Hezhen fluently.

2.2. Statistics

2.1.1. Language Proficiency and Age

Fluency Age \	Nil	Poor	Good	Excellent	Total
> 15	13				13
16-25	23	10			33
26-35	22	8			30
36-45	5	7	3		15
45-55		3	11		14
56-65		1	8	2	11
< 66		2	2	3	7
Total No.	63	31	24	5	123
%	51.2%	25.2%	19.5%	4%	

Table 1: The Correlation Between Hezhen Proficiency and Age

The age correlation is quite obvious: people below 36 speak Hezhen poorly or do not speak it at all and they made up 76.4% of the population; no people below 56 could speak Hezhen fluently, and they made up more than 95% of the population. There is a big difference between the people above 56 and the people below it: 83% of people above 56 speak good or excellent Hezhen; the percentage drops sharply to 48% of equal fluency for the 36-55 age range, and to zero for people below 35. It is clear that age is directly related to proficiency in Hezhen: the younger the age, the lower the proficiency.

2.2.2. Language Proficiency and Education

Fluency Edu \	Nil	Poor	Good	Excellent	Total
Illiterate		4	11	2	17
Prim. sch	19	5	11	2	37
Jr. mid sch	24	14		1	39
Sr. mid sch	19	6	1		26
College	1	2	1		4
Total / %	63/51.2%	31/25.2%	24/19.5%	5/4%	123

Table 2: The Correlation Between Hezhen Proficiency and Education

Table 2 shows that the educational level is inversely proportional to proficiency of Hezhen: the lower the educational level, the higher the proficiency of Hezhen; the reverse also holds. This statistic is consistent with that on age since the old people usually have less education than the young people.

2.3. Summary

From the above statistics, the decline of Hezhen is obvious. This is shown most convincingly in the correlation of age with the proficiency in Hezhen. Since the younger generations of Hezhen can no longer speak their native language and little effort has been made to improve this situation, there seems to be little hope for the Hezhen language to survive.

3. CAUSES OF THE DECLINE OF HEZHEN

Hezhens have a long history of living together with the Han people. At present, even within the three Hezhen settlements, the Hans make up a considerable part of the whole population. Living together with Hans opened up the monolingual Hezhen community and brought about bilingualism of Hezhen and Chinese. These two languages are far from equal in terms of history, current status, prestige, literature, and the number of speakers. In the competition between Hezhen and Chinese, Hezhen is secondary and has lost almost all its functions. The following are factors which, in our opinion, have caused the shift from Hezhen to Chinese.

3.1. Lack of a written form

Hezhen has no written form, and this severely limits its chance of being used as a school medium and more generally as a mass medium. There are no publications in Hezhen, and all the documents such as newspapers, school textbooks, signs and posters are written in Chinese in the three Hezhen settlements.

There have been some efforts to teach Hezhen at school. A few years ago a native speaker of Hezhen was invited to teach the language to the children in a primary school. This man drew some pictures of objects on the blackboard, and then pointed to them while pronouncing the words, and the children read after him. Unfortunately the man went no further in his teaching methods, and the experiment soon ended. Today, Chinese is used exclusively in schools. Such a situation is extremely disadvantageous to the maintenance of Hezhen, because children have no exposure to it at school.

3.2. Intermarriage with the Hans

Chinese only prevails at school, it is also taking over at home. This is mainly a result of intermarriage between the Hezhens and Hans, a tradition that started a long time ago. At the time of our investigation, about 40% of 30-40 year-old Hezhens and about 60% Hezhens below 30 years of age were married to Hans. When native speakers of Hezhen, who are already bilingual in Hezhen and Chinese, marry monoglot Chinese speakers, for a variety of reasons, it is highly unlikely that the Chinese speaker would want to learn Hezhen, so the Hezhen speaker has to compromise by using Chinese at home. When they have children, the above pattern is simply extended: the parents use only Chinese to their children. They do so out of consideration for the future of their children, since knowing Chinese is a necessity for their career. As a result, the next generation naturally becomes monoglot Chinese speakers.

In sum, children grow up in an almost monolingual Chinese environment, both at home and at school.

3.3. Scattered distribution of population

The roughly more than 4,000 Hezhens are living in three settlements which are separated from each other by predominantly Mandarin-speaking districts. In fact, all three Hezhen settlements are mixed with and surrounded by Chinese speakers. Such geographical condition reduces the opportunity for Hezhens to speak their native language.

3.4. Small number of population

Another possible reason for the decline of Hezhen lies in the small number of its speakers. There is a U-shape development in the history of Hezhen's population. In the early 18th century, Hezhen had a population of 12,000; by 1945, when the Hezhen people were liberated from the Japanese occupation, there were only around 300 people left. Such a decline must have had a detrimental effect on the maintenance of the language.

In the past few decades, the population has increased steadily, reaching 1,476 in 1982. In 1987 when we were doing our project, the estimated number of Hezhens was 1,800. At present, it is reported to be around 4,200. Despite the increase of the population, the actual number of Hezhen speakers is not increasing. This is due to the fact that the Hezhen children are not brought up to be Hezhen speakers. The small number itself is not necessarily a condition for language shift, but combined with all the other factors, it does serve to quicken this process.

3.5. Lack of motivation to maintain Hezhen

The Constitution of China states that all nationalities are entitled to use and develop their own languages and writing systems. But in the case of Hezhen, not enough effort has been made by the government to either promote the use of Hezhen or to develop a writing system.

The Hezhen people themselves do not seem to have taken active steps to maintain their language either. For them, the Chinese language symbolizes industrialization, urbanization, more advanced ways of life, and progress in general; not to mention its rich cultural heritage. Learning Chinese has only advantages for them; it is certainly very useful to know Chinese in order to find jobs besides fishing and hunting. Learning Hezhen, however, is not an asset in any

practical sense.

4. LANGUAGE ATTITUDES

With regard to the decline of their language, Hezhen people fall into three groups, as follows:

The first group holds a positive attitude towards their language. They have a strong sense of nationality. They make efforts to keep and develop the language. A few Hezhen people who have had higher education recorded some Hezhen oral literature in the International Phonetic Alphabet and had it published in magazines. An old man named You Jing-xing taught his daughter every day the Hezhen words he knew. His daughter wrote down these words in Chinese Pinyin or Chinese characters. By the time we met her in 1986, she had already collected about seven hundred items.

The second group of people hold a pessimistic attitude towards their language. They know that it is a pity to lose it but feel incapable of doing anything to save it.

The third group of people seem indifferent to the fate of their language. They think the shift from Hezhen to Chinese is a natural thing and it is meaningless to do anything to revive it since all Hezhens can speak Mandarin already.

According to our investigation, the second group of people constitute the majority of the population.

5. CONCLUSION

In this paper, we have described the declining state of Hezhen with statistics collected during 1986-1987 and provided a tentative analysis of the causes for its decline. When these statistics were gathered five years ago, the language shift seemed to us to be irretrievable. However, we need a re-investigation to see whether these conditions have changed, or are continuing.

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SECTION 12

APPROCHES THÉORIQUES EN LINGUISTIQUE CONTEMPORAINE

THEORETICAL POSITIONS IN CURRENT LINGUISTICS

ANALYSE, EQUIVALENCE ET UNIFICATION DES
THEORIES SYNTAXIQUES

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Les théories syntaxiques sont de nos jours si nombreuses que les linguistes eux-mêmes ont du mal à s'y retrouver. Rien, pourtant, ne semble empêcher la prolifération redondante de nouvelles théories. Y mettre de l'ordre est devenu une nécessité inéluctable. L'outil dont j'essaierai de développer les grandes lignes sera posé comme une métathéorie de la syntaxe. Elle aura, d'abord, pour objet de donner une définition de la syntaxe fondée sur l'observation des théories et non des phénomènes auxquels elles se rapportent. Elle envisagera, ensuite, sur la base d'une conception claire et sans équivoque du champ de la syntaxe, de dégager les propriétés indispensables à l'analyse de toute théorie dite syntaxique. Elle étudiera, enfin, les relations entre théories ou systèmes syntaxiques : équivalence, isomorphisme, homomorphisme et unification.

1. DEFINITION METATHEORIQUE DE LA SYNTAXE

D'un point de vue métathéorique, la syntaxe peut être réduite à trois composantes essentielles :

(a) La théorie de la phrase qui regroupe tout ce qui constitue une approche globale de P : l'analyse sujet/prédicat, l'étude des modalités de P, de l'ordre des mots, etc.

(b) La théorie syntaxique qui est une relation particulièrement privilégiée dans la représentation de P. Elle permet à elle seule de représenter une phrase élémentaire du type désigné communément par la formule S-V-(Comp). L'analyse fonctionnelle (sujet, objet, attribut, épithète, etc.), l'analyse distributionnelle et l'analyse dépendancielle sont des théories syntaxiques. Elles sont ouvertes à toutes les catégories (nom, verbe, adjetif, adverbe) constitutives de P. Mais si je les ai repérées par leur capacité à rendre compte d'une phrase élémentaire, c'est pour pouvoir les opposer à d'autres relations qui interviennent dans l'analyse de la phrase

mais qui ne permettent pas d'analyser une structure S-V-(Comp). Il s'agit de la coordination, de la subordination et de l'anaphore. Toutes les relations n'ont pas, en effet, le même ensemble de résultantes, et les résultantes de la relation élémentaire ou encore primaire comprennent une structure S-V-(Comp) qui possède une antériorité méthodologique sur toutes les autres résultantes construites sur la base de la coordination, de la subordination ou de l'anaphore, relations que l'on peut qualifier de secondaires.

(c) Le système syntaxique qui est en quelque sorte l'ouvrage idéal du syntacticien. Il réunit plusieurs éléments :

- i- Les relations primaires: distributionnelle, dépendancielle, fonctionnelle (notées R_1^X).
- ii- Les relations secondaires: coordination, subordination et anaphore (notées R_2^X).
- iii- Les entités de départ: les mots (notés M).
- iv- Les valeurs catégorielles des mots (notées $c(M)$).
- v- Les résultantes des relations primaires: "noeud", "syntagme", "phrase", changements de catégorie, etc. (notées $r(R_1^X)$).
- vi- Les entités de départ propres à la coordination et à la subordination. Elles sont en même temps incluses dans $r(R_1^X)$ (notées MxM).
- vii- Leur valeur catégorielle commune: proposition (notée $c(MxM)$).
- viii- Les résultantes des relations secondaires. Elles n'ont d'existence réelle que dans le cas de la coordination et de la subordination (notées $r(R_2^X)$). On parle souvent de phrase complexe.

Le système syntaxique (SS) est un ensemble qu'on peut noter de la façon suivante :

$$SS = \{ R_1^X, R_2^X, M, c(M), r(R_1^X), MxM, c(MxM), r(R_2^X) \}$$

2. EQUIVALENCE, ISOMORPHISME ET HOMOMORPHISME

Le champ théorique de la syntaxe ainsi élucidé, on pourra désormais savoir sur quoi la comparaison doit exactement porter. Est-ce sur des théories de P, des théories syntaxiques ou des systèmes syntaxiques ? Les domaines de la comparaison les plus syntaxiques, si l'on peut s'exprimer ainsi, sont les deux derniers. Reste à définir les fondements conceptuels de la comparaison.

Pour ce qui est des théories syntaxiques, on parlera délibérément d'équivalence si deux d'entre elles peuvent être rangées dans une classe définie sur la base des propriétés intrinsèques de la théorie syntaxique: catégorielle (dépendancielle ou distributionnelle) et fonctionnelle. Une théorie syntaxique catégorielle repose sur un type de relations qui relient entre eux des éléments désignés en termes de catégorie ("nom",

"verbe", "adjectif", "syntagme nominal", "syntagme verbal", etc.). Elle est soit dépendancielle, dans le cas où elle admet qu'une catégorie x domine ou dépend d'une catégorie y, soit distributionnelle, dans le cas où à chaque catégorie x elle assigne une position X dans une configuration syntaxique donnée. Il est des théories qui sont à la fois dépendancielles et distributionnelles (ex: la théorie des Constituants Marqués et la théorie du Gouvernement et du Liage). Une théorie syntaxique fonctionnelle, en revanche, utilise une terminologie variable explicite sur le fondement sémantique de la relation syntaxique. La grammaire scolaire en est un exemple. Elle n'a pas de théorie syntaxique en dehors des fonctions grammaticales connues (sujet, objet, attribut, épithète, etc.). Une théorie syntaxique peut être encore catégorielle plus fonctionnelle (ex: la Syntaxe Structurale de Tesnière et la théorie du Gouvernement et du Liage où les rôles thématiques incarnent la syntaxe fonctionnelle).

Les propriétés extrinsèques d'une théorie sont beaucoup plus diversifiées, elles intègrent l'ensemble des propriétés méthodologiques et téléologiques. Je ne les aborderai pas ici.

Pour ce qui est des systèmes syntaxiques, la comparaison serait plus intéressante dès lors qu'on a relevé une équivalence entre deux théories syntaxiques. Sachant que la théorie syntaxique est, de par son antériorité méthodologique, la composante de base du système syntaxique. Les notions d'isomorphisme et d'homomorphisme suffisent largement à démontrer le lien entre deux systèmes syntaxiques. En bref, deux systèmes syntaxiques sont dits isomorphes (homomorphes) s'il existe une correspondance bijective (ou pas) entre leurs éléments présentés avec un degré assez élevé de précision. Laquelle précision consiste à relever les différents types de R_1 (s'il y en a plusieurs), les résultantes de R_1 (notamment les structures intermédiaires entre le mot et la phrase et les modes de changement de catégorie), etc.

3. L'UNIFICATION

Le problème de l'unification sera posé de deux manières différentes selon qu'il s'agit de théories syntaxiques ou de systèmes syntaxiques. Unifier les premières revient à réduire la théorie syntaxique catégorielle et la théorie syntaxique fonctionnelle à une même et unique théorie qui pourrait être l'une d'entre elles. Ceci nous rappelle une idée chère à N.Chomsky, à savoir la réduction des fonctions grammaticales classiques (sujet, objet, prédicat, attribut, etc.) à des configurations distributionnelles. Le résultat en est une redéfinition des anciens termes et une généralisation de la notion de fonction grammaticale à d'autres éléments constitutifs de P (de niveau inférieur) sur la base d'une théorie distributionnelle. Mais il ne s'agit là, en aucun cas, d'une unification. Car les fonctions clas-

siques, malgré leur ambiguïté, qui résulte d'ailleurs de la confusion de trois théories: la théorie catégorielle (positionnelle), la théorie fonctionnelle proprement dite (sémantique) et la théorie de P (analyse sujet /Prédicat, ordre des mots), véhiculent un contenu sémantique primordial qui résiste totalement à une définition d'ordre configurationnel relevant, donc, d'une théorie catégorielle. En fait, la théorie catégorielle et la théorie fonctionnelle représentent les deux pôles élémentaires de l'analyse syntaxique : le pôle formel et le pôle sémantique. Attribuer à des relations d'ordre fonctionnel les propriétés de relations d'ordre catégoriel équivaut à attribuer à des relations d'ordre catégoriel les propriétés de relations d'ordre fonctionnel. Le processus d'unification semble s'arrêter au niveau de cette dualité. La théorie du Gouvernement et du Liage, avec l'adoption des rôles thématiques, y adhère parfaitement.

L'unification des systèmes syntaxiques consistera plutôt à unifier toutes les théories qui interviennent dans la formation d'un système syntaxique dont la théorie syntaxique. Elle portera distinctement sur les théories de la subordination, les théories de la coordination, les théories de l'anaphore, les théories des changements de catégorie, etc. L'ensemble de ces théories unifiées est un système syntaxique uniifié.

L'unification prend encore un autre sens si elle consiste à unifier deux théories distinctes du système syntaxique telles que la théorie syntaxique et la théorie de la subordination. Nous en avons un exemple avec L. Tesnière qui en termes de "connexion structurale", (= analyse dépendancielle) essaie d'unifier la relation intra-propositionnelle et la relation inter-propositionnelle de subordination.

Cette approche de l'unification peut, par translation, être étendue à l'ensemble du système de la grammaire (phonologie, morphologie, syntaxe). La généralisation de l'analyse distributionnelle ou de l'analyse dépendancielle à la phonologie, à la morphologie et à la syntaxe sera une forme d'unification de ces domaines. Le rapprochement avec la syntaxe se fera mieux sur la base d'une théorie catégorielle (formelle), car une théorie fonctionnelle (sémantique) ne peut répondre qu'à des spécificités locales propres à certains domaines (i.e la syntaxe et la morphologie).

**ON DEFINING DIRECT LINKS BETWEEN LANGUAGE AND SPEECH:
FOUR STRATEGIES FOR RESOLVING
A FUNDAMENTAL FLAW IN LINGUISTIC THEORY**

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The lack of any direct correspondence between speech and the types of elements and units postulated in linguistic theory (such as features, stress levels, phonemes, phonological syllables, etc.) is a central problem in speech research. In linguistics, authors tend to treat this problem as a pseudo-issue by claiming that postulated units reflect what an individual knows and that there is no necessary link between these entities and physical reality (SPE:14). This is in keeping with saussurean dichotomies suggesting that language is separate from speech and organized by independent mental processes. However, there is much evidence that speech has an organizational capacity. For instance, constraints on the speech apparatus structure syllable rhythms creating categorical values in timing aspects (see Boucher, this volume). The implication is that some of the segmental and distinctive aspects which can convey linguistic information are not "mentally constructed" (SPE:14).

Still, in developing formal grammars, one may maintain that whether or not units of linguistic description correspond to observable patterns is irrelevant given that the units refer to constructs. But this leads to a paradox. Let us assume that postulated units merely represent what individuals know when uttering or perceiving speech, how do they develop the knowledge of their existence (and a fortiori the particular "grammars" of these entities) if nothing in the physical reality of speech conveys such units? The question I address here is whether such views of mental constructs provide for plausible explanations of the language capacity. In current literature one can see four ways of dealing with the preceding paradox.

1. INNATISM AND THE GENERATIVIST PROGRAM

On the above problem, if one answers that mental units derive from innate knowledge, this would suggest purely mental constructions and, like Chomsky (e.g., 1980:100), one would have to invoke something like a spontaneous mutation in phylogeny to explain this capacity. Yet, such a view is at odds with principles of evolution which state that organisms, through such changes as mutations, adapt to surrounding physical aspects. Lenneberg recognized this "profound problem" (1967: 374n); Chomsky, on the other hand, did not effectively address the question. Consider

the following quote which is representative of the author's position:

It is sometimes argued that though knowledge might in principle be innate, it must nevertheless be grounded in experience through evolutionary history [...] But...there is no reason to require... that evolutionary adaptation play some special role. There is no reason to suppose that genetically-determined properties invariably result from specific selection -- consider the case of the capacity to deal with properties of the number system. (*ibid.*:100).

The capacity to process numbers has no clear links with the environment, but it is doctrinaire to conclude that they are non-existent and then revise principles of evolution. Consider that children who suffer from what is known as the syndrome of nonverbal learning disabilities – characterized in part by deficiencies in arithmetic, mathematics and concept-formation – are individuals who have limited movement-based interactions with their surroundings (Rourke, 1988). Regardless of this issue, it must be remembered that, compared to number systems, language does have obvious links with the environment: we are dealing with a behaviour which quintessentially involves communication via physical properties. Of course, humans come to life equipped with the structures for the processing the information of speech; the point is, in claiming that speech does not provide direct physical support for linguistic information, one cannot explain the emergence of information-processing structures.

2. THE PROGRAM OF DESCRIPTIVE PHONETICS

Others suggest that, if correlates of linguistic units have not been found, then it is a problem of inadequate observations. In this program, a solution to the aforementioned paradox hinges on the eventual discovery of direct links between speech and postulated forms. But some veteran researchers argue that after fifty years of searching maybe a reassessment of the guiding concepts is in order (Cooper, 1983). Why is this reassessment not taking place?

3. THE FORMALIST PROGRAM

On this last question, there is a belief that the units of formal models are unquestionable either as theoretical "primitives" or as entities supported by psycholinguistics. On the first point, it is argued that "...the study of phonetics is impossible by itself since an understanding of language...is prerequisite to even determining what is or is not a discrete speech sound or unit" (Fromkin, 1976:104; Anderson, 1981:506). Of course, phoneticians need "linguistic" criteria such as distinctiveness to guide their observations. But such considerations provide no grounds for segmenting speech into units like phonemes. In fact, this division came into phonology as a result of the arbitrary use of alphabetic symbols to represent features. As for psycholinguistic evidence, studies generally involve subjects who know an alphabet and suggestions that the findings support phonemes can be criticised in light of an alphabet-related bias. On the claim that the invention of alphabets implies an awareness of phonemes, it should be noted that alphabets may have emerged from a graphic analysis of syllabaries. Indeed, subjects who do not know the alphabet are spontaneously aware of syllables as opposed to phonemes (see Boucher, 1992).

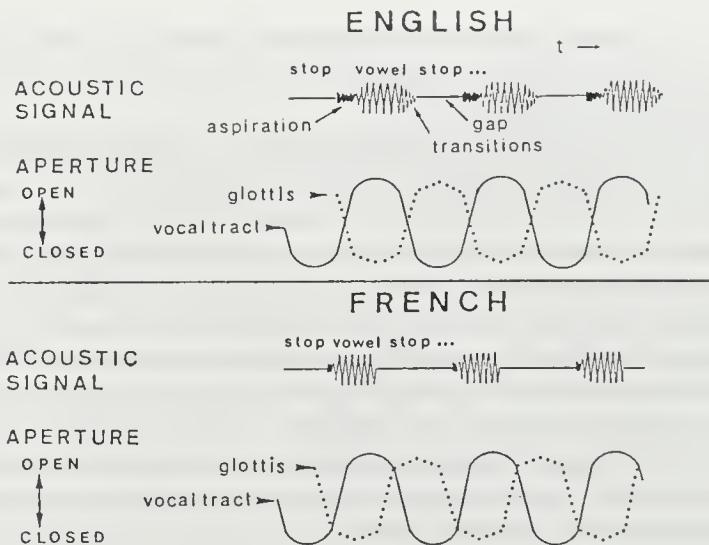
In short, linguistic units are far from unquestionable. In fact, autosegmental phonologists have taken the liberty of redefining segments. This redefinition was not justified by considerations of necessary criteria, or on questions of "psychological reality", or by the need to define units commensurate with physical aspects. The new units are merely, as other devices in formal models, established by decree. From this

perspective, our paradox may in fact be simply "a problem necessitated by arbitrary constraints on the form of linguistic description" (Ohala, 1990:270). One can, however, define non-arbitrary constraints.

4. EXPLOITING DIRECT LINKS: THE "ECOLOGICAL" PROGRAM

What I call the ecological program refers essentially to research which recognizes that, in addition to fundamental properties of communication systems, one has to assume a commensurability between units of speech planning, production and perception. On the issue of basic segmentations, I will not discuss here other proposals but I emphasize that these currently fail to take into account evidence supporting a direct linkage of production, perception and planning on the basis of syllable-size frameworks. For instance, certain timing aspects relating to features are produced and perceived as categorical ratios within syllables. At the planning level, the fact that speech errors involving displacements of features do not occur between "consonants" and "vowels" within a CV frame but across syllables suggests that, at a basic level, the planning of sequences operates in terms of syllables, not phonemes. Importantly, syllable rhythmicity is timed by peripheral mechanoreceptors. These receptors at the level of the larynx are sensitive to the rise in subglottal air pressure during the closing of the oral cavity or the glottis and this triggers opening motions at regular intervals (Boucher, 1989). The result is a segmentation within which timing patterns are sufficiently stable to support feature distinctions. Thus, a peripheral constraint structures a unit which is commensurate with a framework of cognitive planning.

In itself, this perspective suggests explanations of how knowledge of certain units and features can derive from natural constraints in human anatomy. In this view, there is no need to postulate other-wordly entities or revise theories of evolution. But I add that the preceding also provides for more accurate accounts of language-specific aspects in phonological patterns. On this issue, some authors reject as being misguided attempts to define a non-arbitrary basis of linguistic forms and features by pointing to the arbitrariness of how "universal features" are realised in different languages (e.g., Anderson, 1981). Such arguments assume that labels like [+voice] refer to entities in the minds of all individuals rather than to a categorisation of physical phenomena. Consider the problem this way: if a culture X calls a part of the colour spectrum "red" and another part "blue" while a culture Y uses these labels but not for the same extents of the spectrum, it would be rather specious to conclude that there is no necessary physical basis for distinguishing colours. Secondly, one can question the validity of assuming that all language-specific patterning reflects linguistic knowledge. On this point, I have submitted that several differences characterizing the sound patterns of French and English can originate from modifications of a single parameter. To illustrate this, consider the following figure representing hypothetical waveforms of speech motions and corresponding acoustic signal. The up and down wave of the dotted line represents opening and closing motions of the glottis when producing sequences with voiceless stops like / papapa/. The overlapping solid line represents the opening and closing of the vocal tract. Note the difference in the phasing of these pairs of waves: compared to French, glottal closures in English tend to begin later in terms of the vocal tract closures. This accounts for the following acoustic effects: 1) aspirations occur to a larger degree in English because the vocal tract tends to open before glottal closure; 2) in English, closing of the tract tends to begin when the glottis



is still closed and vibrating thus creating transitions and partial diphthongisation; 3) these vowel-final transitions and short intervocalic gaps give the impression of "closed" syllables in English compared to the "open" patterns of French; etc. All these effects can be justified by a single principle bearing on phasing which may relate to learned adjustments of muscular tension. This may also explain why "contextual" effects (e.g., vowel lengthenings before voiced consonants) vary with language. In comparison, a phonological description would require the postulate of several unrelated rules or feature networks which over-generalize the cognitive organisation of the patterns. The problem is that determining whether patterns are the result of cognitive processing or "low" level constraints on activity can be revealed by considering systemic aspects of speech timing. But linguistic data (transcriptions) and analysis (e.g., distributions) fail to capture these systemic aspects in real time and lead to formulas with little explanatory value.

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GB THEORY AS DEPENDENCY GRAMMAR

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There are two major ways to describe syntactic structure: break the sentence into substrings (**constituents**), or establish links between individual words (**dependencies**). Government-binding (GB) theory is largely a dependency theory even though it still uses constituency notation. GB theory can be simplified by recasting it into dependency formalism.¹

1. CONSTITUENCY VS. DEPENDENCY

Both constituency grammar and dependency grammar are centuries old. The concept of dependency apparently originated with the Arabs and was adopted into Latin traditional grammar in the Middle Ages (Covington 1984). Constituent analysis can be traced back to the analysis of logical propositions by the Stoics (Mates 1961).

The key claim of dependency grammar (DG) is that all constructions are **endocentric**, i.e., every phrase has a most prominent element (the **head**) which determines its syntactic properties. Modifiers and complements of the head are called **dependents**. Structure can be diagrammed by drawing arrows from heads to dependents, or by drawing a “dependency tree” (D-tree) in which heads are attached to dependents by lines sloping downward:



Here we say that *some*, *new*, and *of* are **immediate** or **direct** dependents, and *us* is an **indirect** dependent, of *pictures*.

¹For concreteness I use the version of GB theory given by Chomsky (1986). I am not concerned with the correctness of GB theory *per se*, only with its nature as a formal system. As is now usual, I write X' for \bar{X} (etc.).

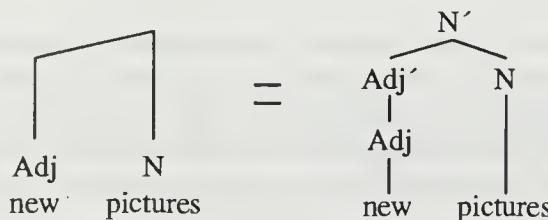
In dependency grammar, constituents still exist, but they are a derived rather than a basic concept. A constituent consists of any head plus all its direct and indirect dependents.

As Mel'čuk (1987) has emphasized, dependency grammar is not a **theory** of language but rather a **notation** for describing structure. Theories of grammar can of course be built upon it, as Mel'čuk, Tesnière, Hudson, Starosta, and others have done.

2. DEPENDENCY AND X-BAR THEORY

2.1. Dependency trees correspond to X-bar trees

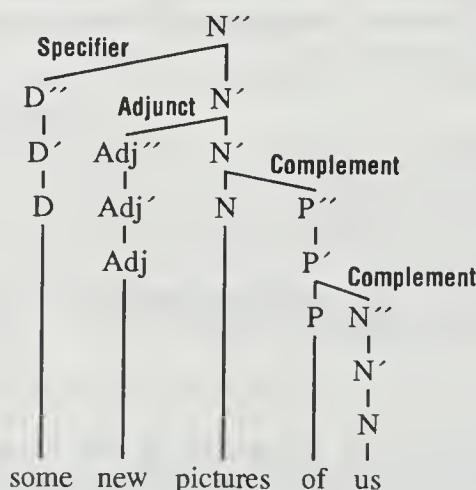
GB theory shares with DG the crucial claim that every phrase has a head. Dependency trees are equivalent to X-bar phrase-structure trees with only one non-terminal bar level, like this:



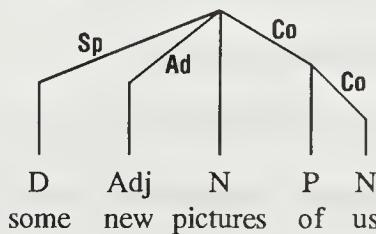
Since the D-tree contains no non-branching nodes, the Adj' node here has no direct counterpart in it; rather, Adj' is supplied implicitly by X-bar theory, which stipulates that all sisters of the head are maximal projections.

2.2. GB theory recognizes three kinds of dependency

One non-terminal bar level is not enough for current GB theory. GB theory recognizes 3 kinds of sisters of the head: **complements** (sisters of X), **adjuncts** (sisters of X' dominated by X'), and the **specifier** (the sister of X' dominated by X''), as in this example:



D-trees cannot preserve the distinction between X, X', and X'' which GB theory uses to distinguish between complements, adjuncts, and specifiers. Instead, I propose that complement, adjunct, and specifier be treated as three kinds of dependency, and labeled as such in the D-tree:



Word order rules for English can then specify that:

- (1) Every constituent (= head plus all direct and indirect dependents) is continuous in linear order.
 - (2) Complements come after the head, before all other dependents.
 - (3) Adjuncts which are adjective phrases precede the head;
 - (4) Adjuncts which are prepositional phrases follow the head;
 - (5) Specifiers precede the head and all its other dependents;
- and so on.

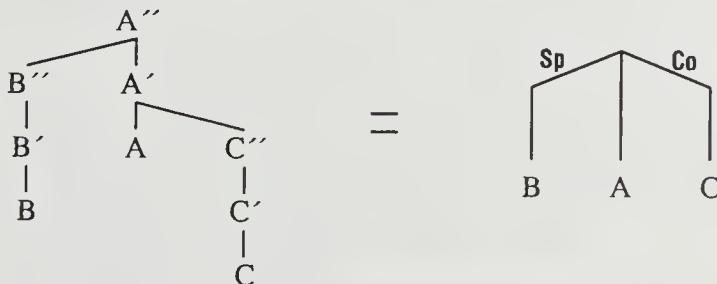
3. GOVERNMENT AS DEPENDENCY

Adopting dependency formalism simplifies the definition of (head) government, which, in GB theory, is the relation between heads and the words to which they assign case, thematic roles, and/or agreement features. Chomsky (1986) defines government essentially as follows:

A governs B if and only if:

- (1) A does not dominate B;
- (2) the lowest maximal projection that dominates A also dominates B;
- (3) there is no maximal projection (of a lexical head) between A and B.²

Consider now the structure:



²Assuming IP and CP are not inherent barriers because they do not have lexical heads.

If only lexical items can govern, then A governs B'' and C''. If phrases can also govern, then B'' governs A', A, and C'', and C'' governs A', A, and B''.

With the tree recast into dependency notation, it is clear that if only lexical items can govern, then the definition of government is:

A governs B iff B is an immediate dependent of A.

One can hardly ask for this to be simpler. If phrases can also govern then:

A governs B iff B is an immediate dependent of A or of the head of A.

Recent work (Rizzi 1990) suggests that government by phrases is in several ways different from government by lexical items. If this is so, the clumsiness in the second definition of government arises from the fact that it conflates two different grammatical relations, both of which pattern according to dependency, not constituent structure.

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Language Acquisition and Evolving Systems

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1. INTRODUCTION My thesis in this paper is that if we take seriously certain apparent phenomena of language acquisition, we will again be able to discuss certain important linguistic problems that have been dismissed by Chomskyan linguistics and begin to find a way to define languages as evolving systems. Here are two of those problems.

1.1. The problem of defining language beyond the individual.

First, in Chomsky's framework there is no way, using strictly linguistic criteria, to define a language, such as "English" or "Serbo-Croatian", beyond that of an individual ideal speaker-listener of English or Serbo-Croatian. Chomsky, in *Language and Problems of Knowledge* (1988: 36-37), argues that "obscure socio-political and normative factors" are needed to define the word 'language' as used in ordinary discourse to refer to such things as 'English'. Chomsky uses the word *language*, "to refer to an *individual* phenomenon, a system represented in the mind/brain of a particular individual." He says that not even "identical twins who grow up in the same social environment" would share exactly the same language, and that "two individuals can communicate to the extent that their languages are sufficiently similar." The first "conceptual shift" of generative grammar was a shift in focus to the internalized language of the individual. What he calls "externalized language," he regards as "an epiphenomenon at best" (Chomsky 1986: 25).

1.2. The problem of language change.

The second problem is that if we can't really talk about languages beyond that of the individual, there is no good way to talk about language change. Despite the profuse flowering of the study of syntax allowed by the focus on the ideal speaker-listener, a linguistic theory that cannot in principle go beyond the language system of an individual to deal with such dynamic and changing systems as "English" or "Serbo-Croatian" is a linguistic theory of limited use and limited validity. Indeed, as we see here at this congress, there is a great deal of energy being spent among linguists to find alternative frameworks to solve these problems.

2. CLUES TO EVOLVING SYSTEMS IN LANGUAGE LEARNING.

Let us look, then, at distinctly non-ideal language learners for clues about how to describe languages as dynamic, evolving systems.

2.1 Learning archaic language.

In talking about learning an evolving language, one of the interesting phenomena is that we are not talking only about learning today's English today and tomorrow's English tomorrow; we also learn yesterday's English, and we recognize it as yesterday's English. On a simple level, with proper names, we recognize that "Matilda" is an old-fashioned name in America, and that "Margaret"

is somewhat less old-fashioned, with such names as "Kimberly" and "Jennifer" more currently in fashion. On a more complex level, Protestants of my generation also learned the language of the King James Bible, with all its thee's and thou's and archaic verb forms and constructions, and they learned it as children before learning to read either the Bible or Shakespeare. It was not just the language of scripture readings; it was the language of prayers, and even children could use this language in their own prayers. Lest it be thought that this is an artifact of a literate society, where the scriptures are written down, we should remember that Bloomfield found the same phenomenon with religious language in the purely oral Menomini language, where in religious ceremonies and incantations people used an archaic language that resembled the proto-Algonquin ancestor of Menomini. Registers and dialects in language are not just a matter of identifying with the language of certain social groups and geographical areas, they also span the history of the language from deeply rooted archaic expressions to the most ephemeral avant-garde slang. Our "synchronic" language is simultaneously "diachronic."

2.2 Learning parts of other dialects.

This archaic language is not limited to protestant Bible-readers or Menomini shamans. Nearly every English speaker knows at least a few bits and pieces of archaic biblical language regardless of their religion, just as they know sayings from Shakespeare plays that they have not read. This language is a part of our culture, brought in originally by people who were biblically literate or devotees of Shakespeare, perhaps, but passed on second hand to others. This is the second point about language acquisition. We do not learn just the dialect of our ethnic group in our neighborhood; we learn, to a greater or lesser extent, the dialects of other groups, often with minimal direct contact with those groups, and those dialects become part of our language. In fact playing with other people's dialects has long been part of our entertainment, both public and private, as we see in the mock Black English of the old minstrel shows, the mock Texas drawl and mock pidgin English of Cowboys and Indians, and the various mock foreign accents in ethnic jokes. And through this play, children and adults learn approximations of other peoples dialects.

2.3 The permeable boundaries of language.

When we begin to consider foreign accent dialects as part of our own individual language, we see that the boundary of our language is in fact permeable to other languages. Jakobson (1936) recognized that in his descriptions of *sprachbünde* or phonological affinities, in which people on language boundaries begin to share phonological features, an example being the loss of the characteristic tones of Swedish as spoken in Finland. Monolingual ethnic Swedes there speak with a Finnish accent. Likewise, the characteristic southern dialect in America was greatly influenced by the African phonology of the slave population (cf. McDavid: 1951). But the permeability of our language boundaries is not limited to phonology. Most Americans know expressions such as *gesundheit!* and *mama mia!* and various words from Yiddish without necessarily having any German or Italian or Jewish ancestry. When Canadians make expressions using English words and French syntax, such as *Team Canada*, other English speakers recognize the oddity but accept it easily, just as they accept such similarly constructed and slightly pretentious food names as *eggs Benedict*, with their hint of French cuisine. This is to say that vocabulary and even elements of syntax from foreign languages are easily incorporated into our language as we learn it--a fact well-documented by those who have studied language contact (cf. Weinreich: 1953; Haugen: 1956).

2.4. Vocabulary learning as the trojan horse of language change.

If we step back to Chomsky's insistence on language as a system in an individual mind/brain and ask about language change, then the only language change we can talk about is a continuation of language learning. For an individual, language learning is language change. Of course Chomsky is interested in language acquisition more as the logical problem of how a child gets from an "initial

state" of no language to a "steady state" of knowledge of the language, in which he can ignore the actual steps of language development and treat language learning "as if it were instantaneous" (Chomsky 1986: 52). If we turn the tables, and focus on the actual steps of development, we see that although there are relatively stable subsystems of language that develop--especially in phonology and syntax--language acquisition and development never ceases. The lexicon, of course, is the most changeable system and no one would deny that we continually learn new words. What is important to recognize, however, is that the lexicon is the trojan horse of language change. Even Chomsky has recognized ever since *Aspects of the Theory of Syntax* (1965) and *Sound Patterns of English* (1968), and even more so in his recent principles and parameters framework, that much of the grammar and phonology of the language is carried in the lexicon. Transitive verbs are marked, for example, that they are followed by direct object noun phrases. And unusual pronunciations are marked for individual words. Therefore, as one learns words and idioms that are new and/or unusual, from whatever source, the seeds of language change are planted in the individual's grammar. The continual growth of one's vocabulary in daily life is not a trivial matter for language acquisition and change.

3. LIVING LANGUAGES AS EVOLVING SYSTEMS

3.1 Language learning and innovation.

Language learning is fundamentally learning the language used by other people in one's larger speech community. Very simple innovations in phonology or syntax, such as the rules for Pig-Latin and other "secret languages" can render a language almost unintelligible to the uninitiated. In areas of semantics, on the other hand, the coining of new words and metaphorical extensions of meaning are very common. But there are limitations: anyone is free to make innovations in language, but only to the extent that the intended meaning is obvious, easily learned, and not confusing with other words or expressions.

3.2 Does a Language have "a life of its own"?

Some innovations in language are almost irresistible. For example, once the word *gay* was commonly used to refer to homosexuals, it became almost impossible to use that adjective in its old meaning of 'happy'. In the 1960's the word *sexism* was introduced into English, and was immediately accepted because of the social consciousness of the time. On a less conscious level, at about the same time the word *hopefully* suddenly gained wide use as a sentence adverb meaning 'I hope that.' And somewhat more recently, people started saying "I could care less" instead of "I couldn't care less." Since 1990, people have started inserting question intonations into their declarative sentences at various phrase and clause boundaries, as if inserting an unspoken "you know?" to keep the attention of the listener. These are a few examples of recent language changes that have been suddenly and widely adopted, putting pressure on all speakers of English to learn them. Innovations presumably arise from individuals, but individuals do not have control over what is out there in the language. Conservative language commentators in the newspapers can complain about what is happening, but they have little power to stem the tide. It is as if a language has a life of its own.

3.3. The promise of "Neural Networks" and "Artificial Life"

Just as the study of formal recursive systems was crucial for the development of generative grammar, the study of parallel distributed processing (or neural networks, or connectionism) and non-linear complex systems may lead us to the next breakthrough in describing languages.

3.3.1 Neural networks

The new "neurally inspired" form of computing involving parallel distributed processing (referred to as "neural networks," and also called "connectionism"), is not intended to be a model of what goes on in the brain, but is a first step in understanding the kinds of processes that neurons can compute. The attempt is to

make computer systems that can learn from the input instead of being directed by a top-down program. A finding that has immediate implications for linguistic theory is that a system can appear to have rule-governed behavior even though the rules never appear in that system (McClelland and Rumelhart: 1986). It is acknowledged that connectionism deals well with the irregular part of language (Pinker: 1991), but it shows promise for the regular part as well. It is the first computing system to show how rule-like behavior might be built up on the basis of exposure to examples.

3.3.2 Artificial Life

There have been several conferences since 1987, both in the USA and in Europe, devoted to the study of self-organizing, self-replicating, evolving systems that have the organizational qualities of life (cf. Langton: 1989, 1992). These are abstract systems in computers. Artificial Life investigators view life "as a property of the *organization* of matter, rather than a property of the matter which is so organized" (Langton 1989: 2). Artificial life programs involve populations of simple programs or specifications. They have no global rules; global behavior *emerges* as a result of the interaction of local rules. The immediate question is whether language might be a form of artificial life, a living system with a life of its own, but made up of a variable population of individual grammars interacting according to local rules (cf. Diller: 1990).

4. Conclusion: What is a Living Language?

Is it a mere metaphor to suggest that languages might be "living"? The data from language acquisition, the permeable boundaries of language that we see in the acquisition process, and the fact that speakers have limited control over the evolution of language, suggest that languages in fact are living systems hosted in populations of individual speakers. They appear to be systems like those of "Artificial Life", amenable to description by the tools of dynamic systems theory.

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THE FUNCTION OF MORPHOLOGY

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The morphology of a language offers a means of using a word instead of a longer phrase wherever the morphological combination is non-obligatory or optional. An example is illness which, in one of its meanings, competes with state of being ill. Some morphological combinations such as those required by the number-marking of nouns (e.g. book: books) and marked agreement (e.g. Latin noun-adjective agreement) among others, do not lend themselves easily, if at all, to the proposition above and can therefore be regarded as obligatory. Obligatory morphological combinations can however be accommodated to the competitive definition of non-obligatory combinations under a historical hypothesis. Under this hypothesis obligatory combinations are regarded as continuations or developments from non-obligatory combinations that arose at an earlier stage of a given language when a competitive (longer) phrase existed.

The hypothesis that obligatory morphology arises from non-obligatory morphology is important for a number of reasons. It is important for (1) the history of morphological change, (2) for the current upsurge of interest in linguistic morphology, and in particular (3) for the claim that linguistic morphology is necessary to linguistic structure. The last is the principal subject of this paper; it appears more reasonable to claim that morphological combinations are not necessary to linguistic structure, but are rather a secondary product of language use. The claim that they are necessary to linguistic structure was recently made in a paper presented elsewhere by an eminent scholar. One may sympathize with his intent to seek greater emphasis on the study of linguistic morphology without conceding that a linguistic structure can not exist without a morphological component.

The morphology of a language consists of two types of combinations: (1) combinations of affixes with a non-affix, i.e. complex combinations, and (2)

combinations of non-affixes, i.e. compound combinations, or compounds. Significant ablaut differences, such as occur in English ride and rode, or tone ablaut differences such as might occur in a tone language, are regarded as being complex combinations.

Morphological combinations could owe their existence to a response to increased frequency of use by a reduction of redundancy in a conceivable language that lacked any morphology rather than because they were necessary to the structure of a language. In this sense morphological combinations might be modifications of the structure of a putative language that originally lacked such combinations.

Chinese approaches being an example of a language that excludes complex words. As I understand it there is only one affix, one that denotes plurality. On the other hand Chinese does exploit compounding extensively. It is perhaps necessary to say that although Chinese is cited here as an example of a language with notable restrictions on its morphology, no claim is being made that such restrictions were always present in its past, for its present state might have been reached by the reduction and elimination of earlier perhaps extensive morphological features. Yet in view of the example of Chinese it is not difficult to imagine a satisfactorily functioning language that lacks compounds as well as complex combinations. It may thus be true and is at least conceivable that a language exists that lacks even compound words.

This consideration fits with a reasonable expectation regarding the language of the first human beings. I take it as a premise that natural language originated just once and that its appearance marked the transition from membership in a non-human species to constituting the human species. This premise permits the explanation of the fact that the human species and language are co-extensive. I call this initial language Proto-Human, to distinguish it from the Proto-World that other scholars believe that they can reconstruct. There are reasons at this time to believe that Proto-Human may not be reconstructible.

It is enormously difficult to see how affixes could have been present in Proto-Human at the moment of transition, if that moment was simultaneous with the invention of the phoneme. It is likewise enormously difficult to attribute compound combinations to any pre-phonemic system of communication that might have existed. Furthermore it is hardly plausible that morphological combinations could have arisen at the moment of phonemic invention or even immediately afterwards. That would appear to commit the inventors of the phoneme to being able immediately to construct compound and complex words without an available pattern or need to do so. It is thus obviously more likely that such combinations post-dated the invention of the phoneme by a significant interval and that that event occurred in the complete absence of such patterns.

It would be arbitrary to demand that a language-like means of communication should not be called a language unless complex and/or compound words were part of the structure. A language lacking such structural features might be clumsy and perhaps less efficient than desirable, but it could function as a means of communication in the same way as those that we already call languages. There is no way known at present to measure differences in language clumsiness, nor in efficiency, where that concerns the comparison of whole languages.

The attribution of such a lack to Proto-Human at its inception can hardly be looked on as arbitrary. It seems rather to satisfy conditions that are intuitively appropriate to the structure of an initial language. However, if that lack indeed characterized Proto-Human language at any stage, it follows that a morphology is not a necessary part of the structure of a language. It should be added nevertheless that this conclusion is not dependent on the monogenetic hypothesis formulated as Proto-Human; it applies equally to the likely structure of any initial language in a polygenetic hypothesis.

If the preceding set of inferences is correct, the original appearance of morphological combinations in a linguistic structure is an evolutionary step. There is thus more involved in the reasoning above since it has been claimed that languages change, but do not evolve (cf. Greenberg 1957.60) in a manner analogous to that of biota. The acquisition of a linguistic morphology appears to provide human language with an analog, much less impressive to be sure, to the increase of complexity in biological organisms. What is involved is a transmissible acquired feature associated with a qualitative difference; it is irrelevant that such a feature might be later lost. Furthermore if obligatory combinations are continuations of non-obligatory combinations, another evolutionary step is involved.

However if the development of a morphology is an increase in complexity, it sets a problem for the theory that the structures of natural languages are equicomplex. The justification of that theory depends on two observations. The first is that at least by and large languages do the same work. Since they are all in constant heavy daily use for essentially the same end, the survival of their respective users, and, with the exception of creole languages, have an extremely long past reaching to Proto-Human, it seems reasonable to believe that they are equally efficient.

The second is that children in every normally functioning society appear to become acceptable speakers of their respective native language at the same rate. Although this observation may not meet with universal approval, it remains difficult to see how a difference of rate, based on more than anecdotal evidence, would have escaped the mutual agreement of observers. This rate, whatever it is and provided it is universal, is a measure of the resistance of a developing child to acquiring his first language.

There is furthermore reason to believe that the structures of all languages today are at the extreme of tolerable complexity. The history of languages lends itself to the theory that linguistic change is the product of two stresses that are placed on its use. The first stress arises from a pressure toward efficiency, the achievement of the same result with less energy. This stress appears in the fact that phonological change, though regular in terms of phoneme sequences, in large part results in shorter words. In so doing, it can and has been shown to deeply affect the system of at least some languages. This stress can now likewise be seen in the appearance of morphological combinations.

The second stress arises from the need of clarity. It appears in the maintenance and/or renewal of system in a language to offset any destructive effects of the first stress. The second stress appears in those analogical changes which increase the systematization of a language.

The theory that the structures of all languages are at maximum complexity makes it possible to explain changes in the direction of systematization as required to offset the effects of the pressure toward efficiency; such offsetting would be unnecessary if the language were not at maximum complexity. To be sure such changes could be attributed to random movements not resulting from the stresses described above. Random movements leading to changes can not be excluded from the results of the interaction of speakers differing in dialect and of the social transmission of a language. In the absence of a metric, such an attribution is difficult to eliminate and must remain a part of any view of linguistic change. At the same time the dialectic nature of the two stresses on a linguistic system is more neatly characterized if language structures are at maximum complexity and remain there in a dynamic equilibrium in part by reason of and in part in spite of linguistic change.

There is a plausible way to reconcile the problem set by the development of morphology as an increase in complexity with the theory that all languages are equicomplex and at the maximum of complexity. It is necessary only to separate the time of the invention of the phoneme from the initial stage of Proto-Human. The invention of the phoneme initiated Pre-Proto-Human. Thereafter this pre-language increased in complexity and terminated when maximum complexity was reached. At that moment Proto-Human began. This solution would permit the formation of the first morphological combinations to have occurred either within the Pre-Proto-Human period or after the initiation of Proto-Human itself, or, for that matter, after Proto-Human had dissolved into daughter languages. At the same time it would contain no basis for a claim that morphological combinations are necessary to linguistic structure.

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LINGUISTIC QUESTIONS THAT LINGUISTICS DOES NOT ASK

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The lay observer might be forgiven for supposing that linguistics was concerned with investigating any and every kind of question about language that it is possible to raise. Superficially, the diversity of topics under discussion at an international congress of linguists might seem to lend support to this assumption. But the assumption is fundamentally mistaken and the reality is otherwise.

A study of the history of the subject shows quite clearly that, in order to gain the recognition accorded to an independent discipline, the founders of modern linguistics felt it essential to distance their field of inquiry from that of neighbouring disciplines which could also claim an interest in linguistic questions.

This search for independence falls into a pattern which can also be observed in the development of other academic fields. To some extent, the pattern might be regarded as inevitable. An academic discipline, at any given time and place, is defined just as much by the questions it does *not* ask as by those it overtly tries to answer. But the pattern by which disciplines seek independence by narrowing down rather than expanding the scope of their inquiries is one which becomes particularly pronounced in the course of the 19th century in Western universities. Of this pattern, language studies provide a prime example.

Modern linguistics, at least since Saussure, has sought to define itself:

- (i) by the *exclusion* of certain questions, even though they apparently fall within the domain of language, and
- (ii) where total exclusion is hardly possible or courts absurdity, by relegating certain questions to the periphery of inquiry.

This latter policy has given rise to the so-called 'hyphenated' subdisciplines: socio-linguistics, psycho-linguistics, etc. These subdisciplines are tolerated, provided they acknowledge their subordinate status and do not attempt any unilateral declarations of independence, or, worse still, attempt to move into and take over central areas of the subject.

In linguistics, as in all other modern disciplines which practise some such pattern of systematic exclusion, the reasons for the division between what is

allowed in and what is kept out are to be sought in a wider context. This context is supplied by the social, political and academic conditions pertinent to the emergence, survival and development of the discipline in a competitive world.

In linguistics, however, the items which constitute this pattern of systematic exclusion reveal relationships pointing to a further factor, which is not immediately evident when the excluded items are considered one by one.

Take, for instance, the exclusion of writing. This seems at first sight to be fairly readily explicable. There was an initial overreaction against the importance earlier generations of scholars had attached to written texts. There was the difficulty of reconciling writing with the doctrine of the linearity of the linguistic sign. There was the difficulty of admitting any visual component of the linguistic sign itself. There was the non-universality of writing as compared with the universality of speech. Any combination of these reasons might be used as a justification for keeping the study of writing out of linguistics proper.

Or take the question of how - or whether - we know what a word means. As is well known, linguistics in its Bloomfieldian and immediately post-Bloomfieldian phases showed a marked disinclination to admit any interest in questions of meaning at all. The standard explanation given is in terms of a misguided but temporary adherence to behaviourism. But the issue goes much deeper. Even today, you can raise this question if you are a philosopher or a psychologist, but you cannot raise it within the disciplinary confines of linguistics. For linguistics has no way of accommodating it. In linguistics, it is simply axiomatic that words have meanings, and somehow these meanings are knowable and statable by suitably qualified experts. The fact that no linguist has ever demonstrated a reliable method for ascertaining the meaning of any given word is passed over in silence as if it were the kind of thing that one ought not to mention in polite society.

Take the question of the distinction between 'correct' and 'incorrect' usage. This one can be raised, but only because linguistics has devised a foolproof strategy for dealing with it. It can either be dismissed as a pseudo-question, which actually relates to social attitudes, educational practices, etc. and therefore belongs in the domain of social psychology rather than linguistics; or else it can be treated as a real but badly formulated question about linguistic variation and rules of grammar. Either way, the normative implications of the question are shrugged off as something linguistics does not deal with.

Fourthly, take the question of the moral dimension of language. Such facts as that language enables people to lie, to conceal, to mislead, to disadvantage others, that language has systematic mechanisms for being economical with the truth, and licences expressions which perpetuate prejudice and injustice - these are all well known. But the question of our moral responsibility for the language we use is one linguistics does not admit. Again, those who insist on raising it all the same will be told that it really belongs somewhere else, perhaps in the domain of rhetoric if not the domain of ethics.

The list of systematic exclusions does not stop there, but the issues mentioned will suffice for purposes of the present discussion.

Now there is a commonly offered explanation which seeks to justify the pattern of systematic exclusions, and indeed to justify them *as systematic*. It goes

something like this. Linguistics has sought to exclude all linguistic questions that are not amenable to unified scientific treatment.

Thus writing is excluded not because in principle there is anything about writing which does not yield to descriptive analytic techniques of the kind linguists deploy, but because the attempt to treat speech and writing within the scope of the same theory would be unscientific. Similarly, the question of the basis of semantic knowledge cannot be brought within the scope of the same science that deals with the organisation of the semantic structures themselves (any more than one would expect the study of transport economies to include a theory of the internal combustion engine). On the other hand, the question of 'correct' and 'incorrect' usage is excluded because there is nothing scientific to say about it at all: it is a question of value judgments. Similarly, the moral dimension of language finds no place in linguistics because, notoriously, morality is not a matter for scientific investigation.

This defence of systematic exclusions in the name of science has various versions which cannot be dealt with in detail here, but all fail to carry conviction on at least two counts.

The first is that when one looks in detail at the way science is defined, it becomes clear that linguistic theorists pick and choose among the available criteria in such a way as to be able to define their own kind of linguistics as scientific. Perhaps in this they are no better and no worse than the practitioners of some other disciplines, but unfortunately it does tend to make the defence of systematic exclusion in the name of science conspicuously circular.

The second count is this. What drops out of sight when the 'scientific defence' is played is the fact that it conveniently lets the linguist off the hook of dealing with a difficult but crucial problem. It is the problem of the language of linguistics itself, its own linguistic status, its justification, its privileged idealizations, its normative role - precisely - in ruling out of court certain controversial or unwelcome questions about language.

This is not to say that linguistics attaches no importance to its own terminology. On the contrary, the history of modern linguistics is full of constant and usually unresolved debates about how to define the phoneme, the morpheme and so on. But these are rather like the debates of theologians on obscure points of doctrine. Nor do the terminological debates between linguists, any more than those between theologians, ever call in question whether the issue debated actually makes any sense at all. On the contrary, the debates serve to reinforce the assumption that here *are* important issues, and thus by implication to validate the language in which the debates are couched.

By playing the 'scientific defence', linguists tacitly appeal to the assumed right of every science to use a language which no one but the specialist can understand, and which therefore is immune to criticism from every viewpoint except that of the specialists who are already committed to it. Needless to say, specialists are the last people to call in question the validity of their own language, since that would automatically undermine their status as specialists.

Now it might perhaps be argued that this position is defensible in the case, say, of chemistry or physics; precisely because chemists and physicists do not claim to be linguists. But it scarcely needs to be emphasized how paradoxical it is

in the case of a so-called 'science of language'. For there, the chosen field of inquiry is one which precludes the excuse that language is not the specialist's concern qua specialist, but only a convenient tool for handling data which are essentially non-linguistic.

In short, the various linguistic questions that linguistics does not ask fit together as different facets of an ultimate question that linguistics cannot face, but cannot fob off on to any other discipline either. It is the question: does linguistics provide answers to any questions at all except those questions which are artifacts of its own invented metalanguage?

The irony of the situation is that when the language of modern linguistics is itself examined, it belies all the fundamental assumptions on which the discipline is ostensibly based.

In the first place, the discourse of modern linguistics accords priority to the written mode, supported by essentially non-verbal devices such as diagrams and mathematical notation. Whereas linguistics, more than any other discipline, is theoretically committed to treating speech as if it were the oral counterpart of writing, while at the same time marginalizing writing as a mere surrogate for speech.

In the second place, the discourse of modern linguistics is not based on a set of signs which function as context-free invariants within a set of rules collectively ratified by any community. On the contrary, it draws on a language in a constant state of flux, greatly influenced by the recommendations of prestigious individuals, and open to innovations to a degree which occasionally borders on chaos.

In the third place, the discourse of modern linguistics is powerfully committed to establishing the academic authority of its own users and to propagating a mechanistic ideology of language.

The linguistic questions that linguistics does not ask are not a random set. As in the case of other forms of normative discourse, the omissions and marginalizations throw a revealing light on the underlying purposes which the discourse itself is designed to promote and the wider social doctrines it subserves.

Linguistics is a discipline which will not come of age until it has learnt the lessons inscribed in its own linguistic practices.

A GRAMMATICAL BASIS FOR LOGICAL INFERENCE

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1. INTRODUCTION

According to received logical wisdom, a set of premisses logically implies a conclusion if the premisses and conclusion are of some form which has no instances with true premisses and a false conclusion. For example, the premisses *Yesterday was Sunday* and *If yesterday was Sunday, then today is Monday* logically imply the conclusion *Today is Monday* because the premisses and conclusion are of the form p ; *if p then q; therefore, q* and this form has no instances with true premisses and a false conclusion. Logicians use the term "valid" for such forms with no counter-instances, and apply it derivatively also to arguments with a valid form.

Contemporary logicians believe, however, that the grammatical structure of natural language arguments is misleading. Hence they construct artificial languages whose grammatical structure is logically perspicuous.

The move to artificial languages creates two problems for the appraisal of the arguments we actually use to convince one another, which are of course expressed in natural languages. First, paraphrasing natural language sentences into an artificial language is an unsystematic activity which we cannot prove we have done correctly. Second, we cannot show that the paraphrase, even if correct, captures all aspects of the grammatical structure of the original. Massey (1975a, 1975b) has pointed out that the second problem creates an asymmetry between our ability to show the validity of certain valid arguments and our inability to show the invalidity of invalid arguments.

2. METHOD

Massey thinks a solution to both problems may lie in a proposal by George Lakoff (1970) that the deep structure of sentences posited by generative semantics is in fact the grammatical structure which logicians want. Lakoff's proposal is understandable. In paraphrasing a natural language argument, we assume that the grammar of the paraphrase is at least a fragment of the grammar of the original. Otherwise the validity of the

paraphrase would not show the validity of the original. Conversely, an adequate set of logical theories should incorporate all the grammatical features of natural-language sentences. Otherwise, the unincorporated features will form the basis of valid arguments which no logical theory recognizes.

In this paper I propose to explore the adequacy of grammatical theory for explicating the logical form of sentences by examining pairs of arguments, one valid and the other invalid, which at first glance have the same grammatical structure. A grammatical theory should explain the underlying grammatical difference in virtue of which the one argument is valid and the other invalid. I shall not appeal to Lakoff's generative semantics or any of its variants, but shall instead use a model of sentential semantics proposed by I. B. Dolinina (1992). In common with other theorists, Dolinina conceives of the semantic core of a simple sentence as a proposition consisting of a predicate and its arguments. A distinctive feature of her model is that grammatical additions to this semantic core--such as mood, tense, voice, taxis--are to be conceived not as modifying some component of this semantic core (e.g. the predicate) but as modifying the whole core. Further, the grammatical semantics of a sentence is multi-faceted: it combines the meanings of the grammatical categories with different aspects of meaning of the proposition's constituents.

3.APPLICATIONS

3.1.Taxonomic Conceptualization

- 1a. *I have seen a portrait of John Wilkes Booth. John Wilkes Booth assassinated Abraham Lincoln. So I have seen a portrait of an assassin of Abraham Lincoln.*
- b. *I have seen a portrait of somebody. Somebody invented the wheeled vehicle. So I have seen a portrait of an inventor of the wheeled vehicle.*

Church (1956, p. 2) invents this pair of arguments to illustrate the reason for shifting from natural languages like English to formalized languages as a vehicle for studying logical form. We recognize that 1a is valid, he says, but 1b is invalid; the superficial linguistic analogy is deceptive.

The form of argument of which 1a is an instance permits one to substitute in place of "John Wilkes Booth" any noun phrase designating a single definite object. The grammatical form of 1a should therefore include the fact that "John Wilkes Booth" designates a single definite object.

In Dolinina's model the difference between 1a and 1b comes out when one specifies the meaning of "somebody" in one of its referential zones, namely, the taxonomic conceptualization of the real world. The indefinite pronoun "somebody" names an indefinite person in an indefinite set of persons. It would be a strange coincidence if two occurrences of "somebody" would refer to the same person.

3.2. Conceptualization of Syntactic Relations

- 2a. *This dog is yours. This dog is an Alsatian. So this dog is your Alsatian.*
 b. *This dog is yours. This dog is a father. So this dog is your father.* (Plato, *Euthydemus* 298e)

2b is the last step in a chain of arguments by which the "sophistical refuter" Euthydemus--apparently a historical figure--drives his interlocutor into an absurdity. It evidently imitates arguments like 2a, which seem valid.

On Dolinina's model the difference between these two arguments comes out when one interprets "Alsatian" and "father" in the referential zone of the conceptualization of their syntactic relations in the sentence, specifically their valency. To be an Alsatian is a unary predicate, to be a father is a binary predicate. The sentence, "This dog is a father" is elliptical for "This dog is a father of x (its puppies)."

The reason for the lack of parallelism is not simply the substitution of a binary for a unary predicate, but rather its substitution in the conclusion in the context of the possessive pronoun "your". "Your father" is not just a concatenation of the concepts "yours" and "a father", as in 2a, but, because "father" signifies a binary predicate, means "father of you".

3.3. Componential Analysis

- 3a. *Cheetahs run. Everything that runs has feet. So cheetahs have feet.*
 b. *Rivers run. Everything that runs has feet. So rivers have feet.*

Walton (1987: 241) presents 3b as an equivocal argument whose sentences have a syntactic structure analogous to a valid form of argument. The problem with 3b is that if we take it as a serious argument put forward with a commitment to the truth of its premisses, we must interpret "run" in its second occurrence in a literal sense, but in its first occurrence in an extended metaphorical sense. But the valid form of which 3a is an instance requires that the places in which "runs" occurs be occupied by the same word with the same meaning.

On Dolinina's model the ambiguity would come out in the analysis of the word "run" into its primitive components (referential zone - real world). The verb "run" in its literal meaning signifies an action which involves three components: movement, its instrument of fulfilment (legs), and high speed. Its metaphorical meaning puts the accent on the component of high speed, and practically eliminates the component of fulfilment with legs. In the first sentence of 3a, it is presupposed that the word is used in its literal meaning, since we are speaking about creatures which have legs. In the first sentence of 3b, on the other hand, it is presupposed that the word is used in its metaphorical meaning, since we are speaking about rivers, which do not have legs.

3.4. Analysis of Grammatical Elements

- 4a. *Spheres are round and are three-dimensional. So spheres are three-dimensional and are round.*
 b. *He took down his pants and peed. So he peed and took down his pants.*

Igor Mel'čuk has remarked that the first sentence of 4b does not have the same meaning as the second sentence. The difference in meaning should explain why 4b is invalid even though it seems to share the syntactic structure which makes 4a valid.

In Dolinina's model, the difference between 4a and 4b comes out in the semantic analysis of the grammatical element "and". Coordination can combine things which are independent or things which are interdependent. It is necessary to examine the real world to determine which kind of combination is intended.

In 4a this conjunction expresses purely the concatenation of the circumstances expressed by its surrounding conjuncts. In 4b it expresses not only concatenation but also temporal sequence. Hence commutation of the clauses is invalid.

4.CONCLUSION

If developed theoretical grammars could provide the basis for complete identification of the logical structure of sentences in natural languages, we could justify the paraphrases of actual arguments into the notations of logical systems, and we could remedy the current asymmetry between our ability to justify judgements of validity and our inability to justify judgements of invalidity. We might even be able ultimately to work directly in natural languages in rigorously appraising the logical validity of arguments.

Such a development of theoretical grammars is a vast and visionary project. I hope only to have shown here that one approach to explicating the semantics of a sentence can bring out the relevant differences between arguments with apparently similar structures which differ in their logical validity.

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PERFECTIVE ASPECTS IN A TOPOLOGICAL GRAMMAR

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Perfective aspects are a kind of completeness of process. To give grammatical descriptions of perfective aspects, we propose a grammar with topology. It is a phrase structure grammar and can express many types of limits, especially completeness, or even incompleteness. In order to express perfective aspects, situational observations are discussed in terms of a contextual language processing model, CLPM.

1. PERFECTIVE ASPECTS

1.1 Characteristics

Perfective aspects express the completion of an event (Comrie 1976). For example, the event "writing a letter" could be aspectualized in perfective form as,

John wrote a letter.

This sentence denotes the actualization of the whole letter, that is, the completion of the event. The next sentence aspectualized, denotes also a kind of completion.

John finished writing a letter.

It focuses on the terminal part of the event, but does not tell about the total event explicitly. Such aspects as this case, called terminative aspects, span a partial event, whereas perfective aspects span the total event. The next sentence, illustrates imperfective aspects.

John was writing a letter.

It gives no information about the initial part or the terminal part of the event. So, imperfective aspects span a partial event, not a total event.

Briefly, perfective aspects are distinct from terminative or imperfective aspects. In terms of expressiveness, their characteristics are

Perfective aspects: Completions and Totalities,

Terminative aspects: Completions and Partialities,

Imperfective aspects: Incompletions and Partialities.

1.2 Functions

1.2.1 Determination of Factivities

In the field of fact retrieval, how to determine the truth value of a sentence is a difficult problem. Perfective aspects contribute in determining factivities in the way of exact resolutions. Without perfective aspects, determining the truth of a sentence might be kind of fuzzy, and not exact.

Perfective aspects express the critical points of factual changes. For example, in a criminal case, the completion of a crime is a key point in discussions of the case. Perfective aspects provide tools in expressing the completion of a fact. So, the critical point of a factual change results after the interpretation of a sentence.

In discussing factivities, it is important to grasp that differences between the functions of verbal aspects, such as perfective aspects, and other verbal terms, such as tenses, are due to differences between tools that express some internal structure and external structure of situations.

Regarding factivities, it is well-known that factive verbs (Kiparsky 1970, Hausser 1976) such as "know", determine their clausal complements true or false. These tools to express factivities, are viewed as outer in syntax, while verbal aspects are viewed as inner in syntax. Verbal aspects seem to be internal in semantics and inner in syntax. And so, this is true that verbal aspects more fundamental and more essential than other terms, especially in cases related to factivities.

With regard to the critical points of factual changes, terminative aspects are more appropriate in expressing these points than perfective aspects. Terminative aspects are intensively complete at the critical points, whereas perfective aspects are uniformly complete over temporal time intervals.

1.2.2 *Constructive Entireties*

In any case, an total, or an entire event consists of three parts: an initial, a main, and a terminal part. One of the characteristics of perfective aspects, totalities have such functions as constructive entireties.

1.3 Representations

It is required that representations of perfective aspects reflect the functions of their two characteristics listed in Section 1.1 (Igarashi 1990, 1987, Igarashi&Yamada 1980).

Since a critical point of a factual change is a boundary point between existence and non-existence of an event, it may be expressed as a certain kind of accumulation point. If we set

- e as an event (e.g., "writing a letter"),
- x as a temporal space interval, then
- $e(x)$ as the graph of the attributive value of the event e in the interval x,
(e.g., the curve of the actualizing degree),

a critical point of a factual change (in this case when a letter is complete) is expressed by

$$\text{Terminal} = \Pi \{ x \mid x=x_1+x_2, e(x_1)>0, e(x_2)=0, x_1 < x_2 \},$$

where Π is a constructive operator noticing accumulation of intervals.

The other critical point, when an event begins to occur (in this case when the letter is initiated), is defined similar to the terminal critical point.

$$\text{Initial} = \Pi \{ x \mid x=x_0+x_1, e(x_0)=0, e(x_1)>0, x_0 < x_1 \}.$$

In the case of the main part of an event (in our example case this is the actual writing of the letter), the interval boundaries of an individual main part are much more obscure, and the main part is much more macro, extensive than the initial or terminal part.

The total interval of an event may be expressed by summation of finitely or infinitely many intervals of individual main parts.

$$\text{Total} = \Sigma \{ x_i \mid e(x_i) > 0 \},$$

where Σ is a constructive operator noticing summation of intervals, and might be interpreted as limit, sup, or inf. Then, the total graph is

$$e(\text{Total}) = e(\Sigma \{ x_i \mid e(x_i) > 0 \}) = \Sigma e(x_i).$$

The critical points of factual changes and also the totalities can be expressed by the representative forms, Πe and Σe , both of which are constructed by an event e . This implies that, semantically, perfective aspects are represented with constructive operators Π and Σ .

In perfective aspects, that **Total** includes **Initial** and **Terminal** implies that representations of perfective aspects by the above definitions reflect the functions of their two characteristics.

2. A GRAMMAR WITH TOPOLOGY

Not only perfective aspects, but, generally speaking, some quantifiers could also be expressed in the form of constructive operators $\Sigma\alpha A\alpha$ or $\Pi\beta B\beta$, where $A\alpha$ or $B\beta$ represents a phrase in a sentence (Igarashi 1992). The domain of parameter α or β could be larger than the natural number for expressing uncountability in linguistic phenomena. This means that a phrase $A\alpha$ or $B\beta$ in a grammar could be uncountable-infinitely many. If uncountable-infinitely many phrases are permissible in the form of a rewriting rule in a grammar, this condition is satisfied, as it follows:

$$A \rightarrow \bigcup_{\alpha} \bigcap_{\beta} B_{\alpha\beta}$$

; α, β in uncountable-infinite-domains.

Moreover, an expression with Σ or Π is a specific kind of a limiting form. To generalize a limiting form, the expression needs to introduce some topology to the set of uncountable-infinitely many phrases.

Since, at a linguistic level, infinitely many phrases permissible in a rule have no effect, they are limited to be at a logical level.

Perfective aspects are expressible in a limiting form in topology. The model for their explicative descriptions are proposed.

3. A CONTEXTUAL LANGUAGE PROCESSING MODEL (CLPM)

The proposed CLPM is designed to interpret sentences in the way that we use their contexts. It consists of a loosely syntactical analyzer, a transformational rule applier, and an interpreter. Its characteristics are:

Inference of context: Context is inferred by a transformational rule, which is applied each time a certain occasion occurs, based on the analysis of paraphrastic expressions in the language.

Process description: In the process of interpretation, which is dependent up on context, the context itself is changed. Newly inferred context is combined together with the old context. The combined context causes more elaborate interpretation; in turn, resulting in a new context. This process involving context change affects the interpretation of a sentence.

Explicit expression in regard to context: In logical expressions, instead of an ordinary statement P , we use a form $W \setminus P$, which explicitly represents context in the W -part of the form.

Perfective aspects expressed with constructive operators Σ or Π , are expressed in the W -part.

4. IMPERFECTIVE ASPECTS

More space than is available here is required to describe semantic differences between perfective and imperfective aspects by topological representations and how we treat them in our proposed contextual language processing model. One component of the model is a grammar with topology.

5. SUMMARY

Perfective aspects provide us with fundamental ideas for situation analysis, along with other terms, e.g., tense, modals, or negations (Igarashi&Yamada 1988). We have found that the primary kinds of verbal aspects are presented by constructive operators, Π and Σ . This fact suggests that primary verbal aspects are specific kinds of quantifiers, like co-ordinators. These results could possibly be applicable for certain linguistic quantifiers.

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**LE LANGAGE, LA POESIE ET LA TRADUCTION POETIQUE OU UNE
APPROCHE SCIENTIFIQUE DANS LA TRADUCTION POETIQUE**

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1. INTRODUCTION

L'esprit véritable de la traduction poétique est impliqué, à mon sens, dans la définition même de la poésie, qui peut être considérée comme un art de la parole destiné à créer une émotion et un style propres à lui et qui n'existent pas dans d'autres combinaisons verbales ou cas du langage, en ce sens que la parole est prise ici en tant qu'unité de langage à double valeur: la valeur préprésentative ou symbolique, celle qui consiste à transmettre un message fait plus souvent de l'extérieur vers l'intérieur, notamment lorsqu'il s'agit d'une poésie où le dialogue s'engage entre les différents moi. Cela revient à dire que la poésie est un phénomène linguistique pris sous sa forme la plus originale en même temps qu'un phénomène de caractère phonique impliquant le sens le plus mélodique du mot. Ce rapport strict entre la poésie et le langage fait de la poésie un art du langage et du traducteur un bon technicien du langage.

2. ACTIVITE DE TRADUCTION

2.1. La traduction poétique est un acte de voir d'abord et de créer ensuite

Jugée au même titre que la poésie, c'est-à-dire vue en tant qu'expérience destinée à atteindre au beau esthétique par les effets du langage, qui est à la fois idée (sens) et musique (son), la traduction poétique ne peut être donc qu'un acte de voir d'abord et de créer ensuite mais à partir d'un contenu qui va du clair au plus sombre, du concret au plus abstrait, et conçu d'après une esthétique au sens étymologique du mot, c'est-à-dire prise dans le sens d'"aesthetica", qui signifie sentir et par analogie "avoir le sentiment du beau". En d'autres termes,

il faut pouvoir apporter une juste explication aux symboles, images, allégories et autres formes du langage poétique pour une bonne traduction. Car l'art du traducteur de la poésie doit consister avant tout à saisir ce qu'il y a de plus concentré et de plus rythmique linguistiquement et esthétiquement parlant. Il faut, pour cela, remonter aux sources du poème en question pour chercher le véritable "charme" poétique, atteindre le "suggestif symbole" (voir René Ghil, 1887). Cela suppose, pour ainsi dire, la recherche d'"une syntaxe picturale liée aux lois de l'esthétique musicale" (voir Camille Soula: *Gloses sur Mallarmé*) et l'utilisation d'un langage fondé sur l'esprit d'analyse et de synthèse. D'où, dans la traductieon poétique, le décodage qui consiste à analyser puis à saisir le sens d'un énoncé pris non pas en tant que tel mais en tant que partie intégrante du texte, et l'encodage destiné à produire des codes nouveaux en partant, comme le fait le poète, des "rapports de la conscience et de l'enconscience, du visible et de l'invisible" (Cocteau 1953: 45), et par conséquent, en tenant compte d'une "sensibilité spéciale à l'égard du langage*" (Valéry 1945: 186), qui seul est capable de jouer le rôle d'une dimension nouvelle" (Valéry 1941: 61) et d'exprimer la réalité traduite "en langage d'objet" (Id.). D'où procède l'importance accordée à la force et à la qualité du symbole, qui devient même le seul critère pour juger de la valeur d'une oeuvre poétique qui est une expérience affective et esthétique destinée à déchiffrer notre Psyché en face de la réalité.

La traduction poétique est ainsi une activité qui demande à être analysée à des niveaux différents. Cela en fait un art de la parole rattaché à une étude approfondie des concepts, qui ont deux aspects: l'aspect sémantique lié aux significations et qui constitue la substance du contenu, et l'aspect esthétique révélé par l'expression et qui procède du caractère antithétique et phonique des mots (Mounin: 1963). Dans l'analyse du concept le traducteur de la poésie doit partir de la double étude des codes: étude du sens, étude des références. Un concept peut impliquer un sens, mais peut avoir plusieurs références, dont le nombre peut changer d'un poème à l'autre. Chez Valéry, par exemple, qui entend par oeuvre poétique une création originale où idée poétique "qui, mise en prose, réclame encore le vers (Valéry 1941: 44), un concept a plusieurs dénominations. A titre d'exemple, pour le "corps" nous avons chez lui des dénominations, telles que "ma triste beauté" (*Album de vers anciens*), "ma chair de lune et de rosée" (Ibid,id.), "mortelle soeur" (moi) (*La Jeune*

Parque), "chair maîtresse" (*Ibid.id.*). Cette divergence et cette multiplicité des références nous amènent à faire un plan à partir de la double fonction du langage: cognitive et affective, objective et subjective, transitive et immanente.

Il faut donc aller, dans la traduction poétique, au-delà du langage ordinaire pour trouver un rapport nécessaire entre le mécanisme interne du poème, qui est de caractère à la fois notionnel et relationnel, et son esthétique qui procède de sa qualité phonique. C'est dire que le langage se trouve reconstruit dans la traduction poétique, qui est une opération à double fonction:

- 1) Fonction d'ordre esthétique ou stylistique
- 2) Fonction d'ordre référentiel.

2.2. La traduction poétique est une création originale

Il s'ensuit qu'il ne faut pas voir en la traduction poétique un simple "art" consistant à produire l'équivalent d'un message donné dans une langue donnée. Il faut la considérer plutôt comme une création originale, qui exige une compétence à la fois linguistique et esthétique, littéraire et artistique. En effet l'univers poétique n'est pas un simple monde de signes. Il est formé de significations ramenées parfois à leur état le plus pur et à leur forme la plus mélodique. Pour le traduire, il faut, pour reprendre les termes de Valéry, "un langage de la création" (Valéry 1941: 177), "un heureux composé de termes" (voir Jacques Charpier 1970: 80). Il ne suffit pas donc de connaître les mots, il faut connaître aussi les choses dont parlent ces mots. Autrement dit, il faut saisir non seulement l'âme ou la couleur du vers ou du texte complet, mais aussi ce qui fait cette couleur. Le meilleur traducteur est celui qui s'applique à voir le texte original comme il est, et en faire un qui l'égale, non pas à en faire un qui lui plaise.

En conclusion la traduction poétique est un domaine qui exige une compétence linguistique, esthétique et technique. Cette caractéristique de la traduction poétique conduit nécessairement à poursuivre dans l'activité de traduction une méthode permettant d'aborder le problème sur son plan à la fois théorique, fonctionnel et spécifique. D'où l'idée de pluridisciplinarité dans la traduction poétique qui peut être considérée comme une forme supérieure de la linguistique réalisée sur le plan de la pratique.

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THE PROBLEM OF ADEQUACY IN LINGUISTICS

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Problems of adequacy have been discussed in the philosophy of science at least since Aristotle. They were raised, first of all, with respect to definitions and classifications, but also, to a lesser extent, with respect to statements and theories. In linguistics, the problem was resumed by Noam Chomsky, who distinguished two levels of adequacy (observational and descriptive) that might be attained by a grammatical description. According to Chomsky, the level of observational adequacy is attained by any grammar that gives a correct account of the primary linguistic data, whereas the higher level of adequacy is attained by a grammar if it gives a correct account not just of the primary linguistic data, but also of the speaker-hearer's own internalized grammar, and thus give an insight not only into the language under investigation, but also into the minds of those who spoke it. Allowing for the possibility that there could be more than one descriptively adequate grammar for a given language Chomsky defined the level of explanatory adequacy, which could be attained by providing a universal linguistic theory that contains an evaluation measure designed to select one out of the series of alternative descriptively adequate grammars for a particular language, and evaluate it as the best grammar for that language. In other words, Chomsky accounts for adequacy in terms of explanation and relates explanation to the problem of universal grammar. However, both the concept of explanation and that of universal grammar are not precise enough to serve as criteria for adequacy.

There are a variety of opinions about what proper explanation ought to be like. Quite often only nomothetic explanations are treated as scientific. They are always connected with prediction and the notion of exceptionless laws. Some scholars even doubt whether there exist satisfactory explanations which are not accompanied by prediction.

Nomothetic explanations are obviously most desirable, but they are applicable only to those domains in which prediction can be made, i.e., which can be fully formalized (mathematized). The description of natural language cannot be fully formalized due to, among other things, its creative character. It is worth mentioning that prediction cannot be achieved not only in the humanities, but also in the sciences of nature, such as, e.g., biology.

And as far as the problem of language universals is concerned, apart from few trivial truths nothing definite can be said about them as yet, and that is why it cannot be taken into consideration in the discussion of the adequacy of linguistic description.

The adequacy of a scientific theory can be defined only by specifying the aims the theory is supposed to accomplish. Linguistics is defined as the scientific study of language. But language is a complex phenomenon and can be studied from various points of view. Each of them can involve different aims. According to Chomsky, the ultimate aim of the linguistic theory is the demonstration that grammatical phenomena in particular languages have their roots in universal grammar, which is conceived of as an innate human facility. In addition to the aspect of language as a genetic endowment many other facets of it can be studied, such as the relationship between language and thinking, the relation between language structure and brain, etc. Much light has been shed on some aspects of language by information theory, a post-war development in science. It has enhanced linguistic studies of the quantitative facet of language phenomena. Statistical investigation of language has a long history, yet it was only thanks to the achievements of information theory that it became possible to account for the phenomenon of redundancy in language and its role in the communicative process.

Yet all these matters constitute objects of investigation for other scientific theories and require different criteria for adequacy from those relevant to linguistic description. In all such matters the adequacy of statements should be checked in accordance with the criteria appropriate for the given domain and independently of the purely linguistic description, i.e., biologically, psychologically, neurologically, and the like. On the other hand, as far as the explanatory power of such statements is concerned, as long as no independent evidence is presented, hypotheses like that of innateness or those having recourse to mind cannot explain anything in linguistics.

New prospects for linguistics have appeared relative to undertaking multifaceted research on communication. This is strictly related to advances in what not so long ago was considered novel: the branch of scientific knowledge constituted by cybernetics. Communication is effected through transmission of information. Information is the notion central to cybernetics. For information to be transmitted, it must be stated in the form of an appropriate sequence of signs belonging to a particular code. A code can be broadly defined as a system of signs utilized for information transmission. Thus, language, as the most comprehensive system of signs, comes within the immediate range of interest of cybernetics. And it is in cybernetics that a very interesting kind of explanation can be found, i. e., modelling.

In cybernetic terms language can be treated as a mechanism of some sort, the input to which is a fixed set of texts and the output of which is the new sentences it produces. Among those sentences may, of course, be ones which have already appeared in the input set. Mechanisms of this sort can be approached in two ways. First, an attempt can be made to gain insight into their

structure, i.e., to answer the question of how they are constructed. Alternatively, rather than attempt to describe the mechanism in question, we can frame a device which, in some respects of concern to us, would behave in the same way as the one under investigation. The latter type of approach, designated as modelling, finds its particular application when the object under investigation is not directly available. A case of exactly this sort comes about with linguistics. Its object, language, is not available for direct investigation. What is given is only the results of its functioning - speaking and (recorded, written) text. The sentences, composed of lexical and grammatical elements in succession, come as a result of latent processes operating in the brain. Creating a model functioning in the same fashion as language does would be an outstanding achievement for linguistics.

Any model must be founded on phenomena observed in language and should take account of our intuition about how we talk. In other words, a model of language will account for the grammatical and semantic structure of sentences. Actual utterances and the speakers' judgements about the sentences of their language constitute the observational data for the linguist. But the linguist may have recourse only to very simple judgements like those concerning such aspects of sentences as their normality vs. oddity, contradiction and entailment, and the like.

For some period of time we have seen intensive work on developing models of language. Formal languages can be taken as a first approximation to such a model. The significance of studies on formal languages for linguistics will be easier to appreciate if we consider the fact that many scientific discoveries are made not by direct observation of natural phenomena but by observation of man-made devices (models). There are two reasons for this. First, the way artificial devices function is simpler and more comprehensible to man than the behaviour of natural phenomena. Secondly, the work of constructing such devices in many cases itself provides the scientist with a clue in his explorations. But it is obvious that this kind of research cannot be treated as an adequate description of (a particular) natural language.

Recently, quite a few attempts at developing linguistic models of natural language have been offered, such as various versions of generative grammar (transformational generative grammar, categorial grammar, dependency grammar, functional generative grammar, generalized phrase structure grammar known as GPSG), several varieties of Montague semantics, and others. They compete with each other for the right to be the best linguistic theory, but it cannot be said about any of them that it is an adequate model of (a particular) natural language for none of them gives a complete and explicit description of it. As has already been said, the description of language cannot be fully formalized.

What seems to play an essential role in this competition is empirical verification rather than evaluation in terms of explanation or universals. A theory is modified and superceded by another one not due to an abstract procedure of evaluation but when a new approach is found which is able to present novel, more coherent, statements in place of the hypotheses that have been found incorrect and rejected in view of fresh evidence.

From what has been said follows that in accordance with generally accepted views in the philosophy of science I consider adequacy and explanation to be two different things and understand the adequacy of linguistic theory simply as its consistency with the linguistic facts (broadly conceived of), and an explanation for a given statement or for a theory as providing independently specified reason (justification) for it.

It seems that the problem of adequacy should be resolved within the scope of linguistics, although, as I have mentioned, the linguist may also take an interest in other issues related to language. It follows that the criteria for the adequacy of a linguistic theory will depend on how we define the object of its inquiry.

LINGUISTIC POLYGRAPHY AND LINGUISTIC POLYPHONY: OLD SAXON /IE, UO/

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1. INTRODUCTION

Intent though linguists may be to espouse a discrete methodology, it is clear, as the century and the millennium close, that a characteristic of science generally is, simply stated, a willingness to openness, a willingness to look to other approaches. Thus, methods and principles informing (a) linguistic prototype theory can be found to interdigitate with those of (b) literary deconstruction and with those of (c) philosophical semiotics.

Consider, e.g., the concepts of extended signification, experiential qualities, concretization of features, and family resemblance or intertextuality or iconicity, to which prototype theory, deconstruction, and semiotics are mutually open. Thus destruction of monolithic signification is reflected in Langacker's (1987: 17) observation that "there is no specific degree from the prototype beyond which a person is absolutely incapable of perceiving a similarity," beside Derrida's (1976: 280) extension of "the domain and play of signification infinitely," beside Peirce's (1932: §302) aphoristic "symbols grow." That signification is grounded in experience is reflected in Langacker's (*loc. cit.*) "prototypical instances ... generally occur the most frequently in our experience," as well as in Lakoff's (1987: 154) answer in the negative to the question "Are concepts and reason 'transcendental,' that is, independent of the nature and bodies of reasoning beings?" which overlap with Derrida's (*loc. cit.*) signification as "not a fixed locus but a function ... the absence of a transcendental signified" and with Uexküll's (1940: 61, translation, mine) theory of autoambience which holds that: "The body likened to a house is, on the one hand, the creator of meaningful signs, which inhabit its garden, and, on the other hand, it is the creation of these signs, which intervene as motifs in the construction of the house." Lakoff's (1987) "image-schemas" and Langacker's (1987) "trajector/landmark" schemas, beside Foucault's (1972) "node within a network" and Barthes' (1977) "multi-dimensional space," beside Thom's (1975) "archetypal morphologies" or "elementary catastrophes" display well cross-methodological foci on the concretization of features.

2. CENTER/PERIPHERY SCHEMA

This paper exploits the paradigms of prototype theory, deconstruction, and semiotics bridging the humane and natural sciences, in order to refocus and, in fact, to shed new light on an intractable problem in Germanic phonology, viz. Old Saxon (OS) *<ie, uo>; <ie>* data will serve as the working example for both. Observe in the chart below (reprinted from Rauch: 1992, by permission of Peter Lang Publishing) the mutual interaction of commonalities of the three approaches in a set of digraph

data from the ninth/tenth century Old Saxon *Heliand*. Manuscripts C (Cotton) and M (Munich), represented below, are the two major documents; the lesser in volume are the Prague, Vatican, and Straubing manuscripts. The ten graphs and digraphs occur, e.g., in the nine listed words. Each word is displayed by the most frequent graphic representation. Although the frequency criterion can be used in locating the canonical or central members, which graphic representations would be most spontaneous cannot, of course, be tested. However, the wide variety of graphic variation in Old Saxon holds promise of some scribal freedom, that element which is called Firstness in the semiotic approach.

<i>liuhtian</i> 'light'	u 1C	iu 3M 2C	io 1M	eo 1C				
<i>sniumo</i> 'quickly'		iu 7M 7C	io 1C			i 1C		
<i>liudi</i> 'people'	u 1C	eu 1M	iu 110M 120C	io 2C	eo 2C			
<i>thiod</i> 'nation'		iu 2C	io 73M 61C	eo 8M 14C	ie 24C	ia 3M		
<i>llof</i> 'dear'			io 27M 28C	eo 8M 3C	ie 13C	ia 2M	i 1C	
<i>hlier</i> 'cheek'				eo 1M	ie 2C		ea 1M	
<i>mēda</i> 'reward'				eo 1C	ie 11C		e 1M 10M 2C	
<i>hier</i> 'here'					ie 135C		i 36M 6C	c 85M 12C
<i>th̄thie</i> 'the'						ea M some C many	i M some C few	e M many C some
	u e	eu e	iu i	io o	eo e	ie i	ia a	ea e
							i i	e e

On the analogy of Polysemy, we regard the graphs as Polygraphy, and if symbol equals sound, Polyphony linguistically. Old Saxon scholarship (c.g. Klein: 1985), posits three distinct categories for these data: /iu, ia, ē/. Central to the series

or network is the <eo> area where the three categories actually overlap. Chaining the family resemblance outward to the left shows but one feature difference, raising or lowering of one of the digraph components <eo io iu eu u> of *inliuhtian, sniumo, liudi*, with the highest frequency member <iu> central to this first subseries or subcategory. The subcategory's extension to <i> is a somewhat spurious metonymic/synecdochic extension.

The broadest digraph subcategory is the <iu io eo ie ia ea i> subseries of *thiod, liof, hlier* with highest frequency in the <ie eo ie> range as central. This second subcategory could show extension by one feature, but for <eo> to <ie>. If <ie> and <ea> were interchanged, the family resemblance would be intact, but notice the frequency of <ea> for this second subcategory. The fact that the <io> subseries extends better to the right is significant. Subcategory three digraphs chain well enough, although this subseries of *mēda, hier, thie/thē* would pattern better with <ie> at the center with <e>. The two peripheral monophthongs of the macrocategory are indicative of the diachronic change into Middle Low German ð and ē. On the other hand, if <ie> stays as originally shown, it, with <eo> and <io>, becomes central to the combined subcategories two and three, which are indeed beginning to encroach on one another's space, but at this stage of Old Saxon they do not yet resemble each other well, as seen above, viz. <eo> beside <ie>.

3. PARALINGUISTICALLY CONDITIONED CONVERSE RULE

OS <ie>, together with its velar partner <uo>, are viewed in the literature (Rooth: 1956, Moulton: 1961) as orthographic borrowing from Old High German (OHG) to signify OS [ē, ö] and to distinguish these from OS [ē, ɔ], respectively (Foerste: 1950, Cordes: 1956). Data such as OS *hie* 'he' and *thie* 'the,' masc. sg., which display -r and non-h, and non-digraph forms in OHG *er* and *der*, as well as OS *nuon* 'none, ninth hour,' which is cognate with OHG *non*, highlight the lack of realism in the Old High German orthographic borrowing theory to which <ie, uo> are subjected in the literature.

If one of Jakobson's naturalness rules, articulated by van Ginneken (1956: 576), is considered, viz., "the tendency towards diphthongization of the main syllable and that towards apocope of the accompanying syllable," we notice that the end syllables in the digraph-producing manuscript C are far better preserved than in the monograph-producing manuscript M, a fact that has long been disputed and judged incongruous by researchers working with Old Saxon umlaut phenomena. In effect, we find in manuscript C a correlation in which glided vowels, if not full diphthongs, are compatible with full vowels, a Nietzschean turnabout ("chronologische Umdrehung"), a deconstruction, requiring the converse of the Jakobson rule. The converse rule is possible if it is paralinguistically conditioned by the vocal qualifier feature of extent, which opposes drawl to clipping. The drawl conditioner finds its substantiation not only in the preservation of weakly stressed vowels and diphthongs, but also in the cofeature of vowel epenthesis around resonants in manuscript C as compared to manuscript M. The *ie* is thus determined as a semiotic Secondness phenomenon, that is, as compelled by linguistic use. The highly frequent OS *thē/thie*, cited above, alone challenges the Old High German orthographic borrowing myth. Together with the before mentioned OS *hie, thie* is in non-iconic relationship with OHG *der* and *er*.

4. CONCLUSION

The peculiar, perhaps dialect oriented, polygraphy/polyphony network of subcategory three would read, as proposed above, <eo ea ia ie e i>. However, the family resemblance, alias intertextuality, alias iconicity, of <ie> with subcategory two <eo io> is particularly attractive in establishing actual diphthongization for Old

Saxon, surely in manuscript C, since <eo io> have never been perceived as non-diphthongs. While we may wish three phonemes to emerge from the Old Saxon data, they would not be /iu, ia, ē/ (Klein, sect. 2 above). More realistic is /iu, io, ie/ (cf. Rauch 1992: §19.4.31 for their phonetic values), reflective of their live movement and interaction which depict the encroachment of recognized diphthongs on the polygraphic/polyphonic space of <ie>, ceteris paribus, <uo> in the perception of the ninth/tenth century Old Saxon scribes.

It will be noted that the macrocategory schema (sect. 2 above) with its three subcategories moves in harmony with the known genetic/diachronic facts. Immediately, exploitation of this Old Saxon schematization for corroboration of the predictive capacity of cognitive method suggests itself. The literature is sprinkled with this daunting challenge, or should it be called a wishful thought. Thus Geeraerts (1983: 28) asks whether a particular peripheral nuance can be considered a diachronic development. Whereas Winters (1989: 709) writes that cognitive grammar makes claims about how semantic fields develop, Janda (1990: 286) speaks of dynamic semantic forces masking the record of historical development.

To be sure, the linguistic categorization of OS <ie> deals with polygraphy/polyphony and not with syntax/semantics. But has the time not come to draw phonology within the semantic, the cognitive realm of human experience? Semiotically phonology, too, is a text whereof "creative and provocative aspects ... can be understood in terms of the dynamic relationship between central and marginal forms of existence" (Yamaguchi 1992: 122-23).

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IS CARTESIAN LINGUISTICS STILL POSSIBLE?

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One of the aims of the Congress has been set as a contribution to mutual understanding among different approaches to theoretical linguistics. An effective discussion is to be supported, which would allow for using a qualified diversity of views to find positive insights in others' opinions and, enriching each other, to come closer to a fruitful synthesis of the results of various trends of research.

In this context it may be recalled that also a more intensive observation of the history of linguistics can be of importance. One of the fundamental requirements of transformational description, more than 25 years ago, with Chomsky's Cartesian Linguistics, was that the description should have its center in the underlying representations (URs) of sentences, which would be appropriate as a starting point both to semantic interpretation (as an interdisciplinary domain) and to the transition towards the sound patterns. This requirement has much in common both with the classical Saussurean image of the level of (literal) meaning as a linguistic patterning of the (cognitive) content and with the endeavor to find a psychologically realistic description framework based on an autonomous syntax and disclosing the core of the innate mechanism of language acquisition. I want to point out that a possibility to find such a framework still is open, if linguistic competence (or the system of language) is viewed upon as anchored in the process of communication, and if two fundamental ingredients of European structural and functional linguistics are integrated into modern theoretical thinking, which requires the framework to display an explicit, formal shape.

These two ingredients, both of which are more or less anthropocentric and connected with the fact that natural language has developed and exists as one of the pre-requisites of human communication, are: (i) the topic-focus articulation of the sentence, and (ii) the central role of valency (or dependency, i.e. the relationship between a head and a complementation) in syntax.

These two points, discussed in the plenary paper by Eva Hajičová, and in more detail in the writings she quotes, are suitable for a framework with which URs can (a) have the shape of terminal representations of a generative procedure formulated in very general terms, and (b) serve as the input to se-

mantic interpretation.

The valency based core of sentence structure can be described in a way illustrated by ex. (1) and the tree in Fig.1; the capitals denote the bearer of the intonation center (as we shall see, it is important to take the sentence stress into account in every discussion concerning topic and focus).

- (1) Last year Mary moved to Chicago from BOSTON.

If not only dependency, but also coordination (and apposition) is taken into consideration, the two dimensions of the dependency tree are not sufficient; however, the interplay of dimensions meets (with limited exceptions) such strong restrictions as that of projectivity: whenever node e depends on node f and node g lies between e and f under the left-to-right ordering, then g is subordinated to f (where 'subordinated' is the transitive closure of 'depends'). These restrictions allow for a linearization of the networks, using one kind of indexed brackets for dependent items (with a subscript at the parenthesis closer to the head) and another one for coordination. Thus, (2') is a simplified UR of (2):

- (2) Mary and John, our neighbors, who are a nice pair, ARRIVE
 (2') $\{\{ \{ \text{Mary } \text{John} \}_{\text{Conj}} (I.\text{Plur})_{\text{Appur}} \text{ neighbor.} \text{Plur.} \text{Def} \} \}_{\text{Appos}}$
 $\quad (\text{Gener} (\text{Rel})_{\text{Act}} \text{ be.} \text{Indic.} \text{Pres } (\text{Obj} (\text{nice})_{\text{Gener}} \text{ pair.} \text{Sing.} \text{Indef}))_{\text{Act}} (\text{here})_{\text{Dir.}2} \text{ arrive.} \text{Indic.} \text{Pres}$

A generative procedure or an equivalent declarative specification (based on unification) can then describe the URs using information stored in lexical entries, namely (a) a list of possible complementations for the given head word (partly specified as common for all elements of a whole word class), and (b) values of the parameters of each complementation, which is (i) present at most once with an occurrence of a head, (ii) obligatory with the given head, (iii) expressed by a marked surface means, (iv) deletable, (v) an optional or obligatory controller, (vi) able to occupy a specific position (of Subject, of a wh-item), (vii) a barrier to some kind of movement, (viii) subject to specific subcategorization conditions), and so on. The procedure ensures that the UR meets the conditions given by the lexical entries of the heads and allows for the dependent nodes in the topic (to the left of the head) to be generated in any order; i.e., grammar allows the speaker to use a word order corresponding to her/his discourse strategies (topic proper, then other parts of the topic, then focus, in the typical case) and to the chosen distribution of operator scopes. Within the focus part of the sentence the underlying word order is determined by the systemic ordering of the kinds of complementations (i.e. of the valency slots); e.g. in (1) the order Dir.2 - Dir.1 points to Dir.2 being included in the topic, since if the two complementations are in the focus, the order can only be Dir.1 - Dir.2: *from Boston to CHICAGO*.

Movement rules (including the shift of the temporal adverbial to the left of the Subject and of the verb immediately after it in (1), or a secondary

placement of the intonation center e.g. in (3), in some cases substituted by specific syntactic constructions, see (4)) account for the main differences between the underlying and the surface word order. Other differences consist in surface placement rules for the verb, the adjective, the clitics, etc., in individual languages.

- (3) John made a CANOE out of every log.
- (4) John made every log into a CANOE.

The decision which word depends on which is essentially determined by syntactic substitutability: the item substitutable for the whole group is its head, as with ((*very old*) *tables*; if no element of the group can be left out, we may turn from words to word classes: (*his brother* is analogous to (*his tables* and *treat (children)(gently)* to *read (books)(eagerly)*). Underlying correlates of function words are treated as grammatical, rather than as lexical items (this has a long tradition in dependency based grammars), so that they have the shape of parts of complex labels, rather than that of nodes.

The two basic kinds of complementation in URs, Actor and Objective, are syntactically based (understood as 'deep Subject' and 'deep Object', respectively), since such cognitive oppositions as that between a deliberate Agentive and a Theme are not present in the linguistic patterning of meaning:

- (5) Jim broke the WINDOW.

A speaker of (5) may not know if John wanted to break the window, which shows that the opposition instantiates vagueness, rather than ambiguity. Only with further complementations (Addressee, Instrument, etc.), semantic oppositions underlie the linguistic patterning more directly. Thus, in (6) Actor, Objective and Addressee are present, in (3) the third complementation is that of Origin, in (7) that of Effect.

- (6) Tom sent a letter to MARY.
- (7) They changed the house into a SLAM.

However, if only two complementations are included in the frame of a verb, then in the linguistic structure they are Actor and Objective, even if the latter corresponds to the cognitive role primarily reflected e.g. by an Addressee as in (8), or by an Effect as in (9), etc.

- (8) Jim addressed the whole FAMILY.
- (9) They built a HOUSE.

Accounting for the relationships between URs and the surface syntactic (or morphemic) shapes of sentences, the regularities of government (of an object by its governing verb: *meet someone*, *think of something*, Germ. *jemanden sehen*, *jemandem begegnen*, *an etwas denken*, and so on) and of grammatical agreement are handled by markedness rules (the irregular cases of

government, such as the prepositions or the Dative rendering the Objective being determined by the data in the frame of the governing word). In the unmarked, prototypical case, the nominative (or a corresponding word order position) renders the Actor, the Accusative renders the Objective, and similarly the Dative and the preposition *from* render the Addressee and the Dir.1, respectively, and so on.

With such an approach, allowing for a degree of "free word order" in URs, such classical postulates of synchronic linguistics can be met as (a) to distinguish language as a system both from its use in communication and from non-linguistic patterning of content (which itself is not directly accessible to human knowledge) as disclosed by inferencing based on context, (b) to store much of grammatical information in the lexicon, thus acknowledging the role of the word as a basic unit of language, as was done by F. de Saussure, R. Jakobson, E. M. Uhlenbeck and others, and (c) to establish (underlying) syntax as the core of linguistic description in the sense of Chomsky's Cartesian Linguistics.

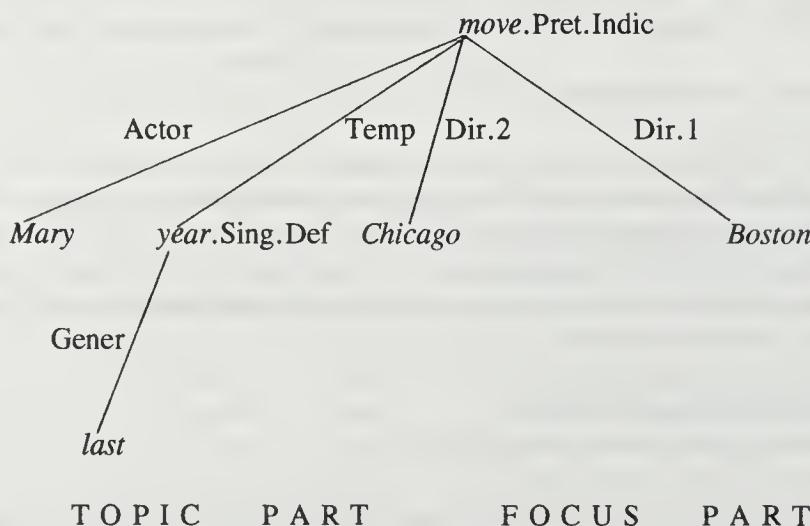


Fig. 1.

ON THE CRITERIA OF ACCEPTANCE IN LINGUISTICS*

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For almost two centuries leading linguists have tried to dispel the mysteries of language through science. Some mysteries indeed have been dispelled, but linguistics even today has not developed a scientifically acceptable body of theory: there are nearly as many types of grammar extant as there are leading linguists to promote them, and it is not at all clear that we can choose among them using scientific criteria. This has led to a reexamination of the foundations of linguistics (See Yngve 1981, 1986a, 1986b, and many LACUS papers).

1. THE CRITERIA OF ACCEPTANCE IN SCIENCE

Let us start by recalling that science studies the phenomena of nature. It operates by proposing theories of what may be true of the world and testing the theories through observation and experiment. The modern criteria of scientific "truth" have been honed by scientists over the last four centuries or so. What has worked has been retained and what has not worked has been discarded. In this stable noncontroversial scientific tradition, (i) the criteria of acceptance of observational facts is their public reproducibility when questioned and (ii) the criteria of acceptance of theories is their ability to pass appropriate tests against observational evidence when challenged. The late Nobel laureate Richard P. Feynman explained:

The principle of science, the definition, almost, is the following: *The test of all knowledge is experiment.* Experiment is the *sole judge* of scientific "truth." But what is the source of knowledge? Where do the laws that are to be tested come from? Experiment, itself, helps to produce these laws, in the sense that it gives us hints. But also needed is *imagination* to create from these hints the great generalizations—to guess at the wonderful, simple, but very strange patterns beneath them all, and then to experiment to check again whether we have made the right guesses. [1963:1-1]

When Feynman says "experiment" he includes careful observation. If we wish to learn how to do good science, we would best study science under good scientists or at least read books by good scientists like Feynman.

Science operates with the bare minimum of assumptions. Briefly: (i) that there is a world out there to be studied, (ii) that it is coherent, so we have a chance of finding out something about it, (iii) that we can reach valid conclusions by reasoning from valid premises, and (iv) that observed effects flow from immediate causes, which underlies normal observational inferences.

None of the developed sciences accepts any further special subject-matter assumptions unjustified by the above criteria of acceptance. The application of the standard criteria of acceptance in science has led to rejecting many false ideas and to great successes in expanding our knowledge of the natural world through the

physical, chemical, and biological sciences. Since none of the many grammatical theories so far proposed has ever met the standard criteria of science, they would all be rejected by science.

2. PROBLEMS OF CRITERIA IN GRAMMAR

Normative grammar is not and never has been a science. It grew out of Alexandrian classical scholarship and Stoic semiotic theory in the second century B.C. The Stoic triadic theory of signs is still influential today through its descendants in logic and philosophy, and the Greek and Latin grammatical tradition erected on its metatheory has supported literacy in the Western world for over two millennia. The conceptual structure of this joint philosophical-grammatical tradition is now so deeply entrenched in Western thought and is so familiar to us through its concepts embedded in our very language that to layman and linguist alike it has seemed obviously true and beyond question.

Normative grammar, not being a science, has always had problems with its criteria of acceptance. And its semiotic cotheory in philosophy has been of no help in this regard either: being true to its origins it, too, is not scientific.

3. PROBLEMS OF CRITERIA IN MODERN LINGUISTICS

The nineteenth and twentieth centuries have seen efforts to make linguistics scientific. We speak of "linguistic science" and the "scientific study of language." Many linguists believe that linguistics already is scientific; others think it would be desirable to develop linguistics further as a science. But efforts to make linguistics scientific have failed because of the strong influence of the nonscientific philosophical-semiotic-grammatical tradition. Recently, unsupported and scientifically unjustified assumptions have multiplied with abandon.

The work of Chomsky represents one example of this. Another is the paper by Bickhard and Campbell (1992:401) discussed in the panel on Functional Pragmatics last Tuesday. That paper gives lip service to science but it would redefine speaker-listeners as "epistemic agents," and ground linguistics not in science but in epistemology and a philosophical psychology and sociology. Requests for scientific evidence to back up the claims (p.549) are unanswerable and not answered (p. 557). Instead they are misrepresented as positivism and met with attacks on the questioner, inappropriate in a science. If linguistics is to become scientific, it must judge its theories on scientific criteria, not philosophical or other criteria.

Some philosophers have tried to justify unscientific theories in linguistics and elsewhere by trying to change the rules of the game and arbitrarily redefining science so that every object would be studied by methods appropriate to that object. Nonsense. A study of ghosts could not be made scientific by proposing a new type of science just for ghosts. Allowing such free exemptions from standard scientific criteria would leave science powerless to reject false theories.

Resting on unsupported assumptions, the study of language does not have a proper scientific foundation and therefore is not scientific at all even though it may use tape-recorded utterances as data. A study of ghosts would not be made scientific by putting a tape recorder in an allegedly haunted house because such a study would still rest on the unsupported assumptions that there are ghosts.

As a result of its nonscientific foundations, linguistics has had many problems establishing its facts and accepting or rejecting its theories. Let us list a few of the questions that seem reasonable but cannot be studied scientifically because, like the study of ghosts, they involve unsupported assumptions:

- 1) What is a word? How many words are there in a given recorded utterance?
- 2) What is a phoneme? How many phonemes are there in English?
- 3) What is a syllable? How can we segment a given utterance into syllables?
- 4) What is a morpheme? How many morphemes does the word "run" represent in English?

- 5) What is a part of speech? How many parts of speech are there in English? What are they?
- 6) What is a sentence? What is the structure of a given sentence? How does one diagram sentences?
- 7) What is meaning? What does a given word mean? What does a given sentence mean?
- 8) What is language?
- 9) What is a language?

These questions cannot be investigated scientifically because concepts of language and grammar do not rest on a scientifically justified foundation but instead on unsupported assumptions that cannot be checked. The criteria of science do not apply in the grammatical domain just as they do not apply in philosophy or in logic. Theories in these domains cannot be tested scientifically.

4. CRITERIA IN A LINGUISTICS FOCUSED ON PEOPLE

The criteria of science, which involve observation and experiment, can only be applied to objects observable in the physical sense. Because such objects are rooted in reality they do not have to be introduced by unjustified assumptions. If linguistics is to be scientific it must make statements ultimately testable against the real world. A way to do this is at hand, for linguists have frequently tried to find explanations in terms of people. One could mention the proposed explanations of the neogrammarian, much of the work in historical linguistics, and modern work in psycholinguistics, sociolinguistics, and elsewhere. Linguistics actually could be scientific if it focused on people, for people can be observed and can even be the subjects of experiments,

Unfortunately, most statements in linguistics proposing explanations in terms of people also incorporate unsupported and untestable assumptions about language inherited unquestioningly from the grammatical tradition. It does make sense to inquire into the structures of the individual responsible for talking and understanding, but to assume that people have grammars in their heads is like assuming that allegedly haunted houses have ghosts in them. A grammar is not a scientific theory of an individual or of a community. Grammatical theories are not theories of people at all: they are theories of language, whatever that is, and as such they cannot be tested using the normal criteria of science.

What we need to do is to find out how to make significant testable linguistic statements directly in terms of people without introducing unsupported assumptions about language or grammar. We must give science first place. We must reexamine all our linguistic concepts and develop a new foundation to replace the philosophical-grammatical foundation inherited from the tradition (Yngve 1986b).

Let us take a preliminary look at the beginning of such a reformulation:

- 1) Instead of studying language, we study how people communicate, both verbally and nonverbally.
- 2) Instead of developing grammatical theories of language we develop scientific theories of people from a communicative point of view.
- 3) Instead of seeing children as acquiring language, we see them as starting to talk, or rather, to communicate both verbally and nonverbally.
- 4) Instead of speaking of the development of language, we speak of the development of the child.
- 5) Instead of searching for grammatical properties of language, we search for communicative properties of people.
- 6) Instead of seeing people as using language or as speaking words and sentences, we see them as carrying out communicative tasks.
- 7) Instead of seeing a person as a language user, we represent a person as a *communicating individual*, a concept that owes nothing to the grammatical tradition.
- 8) Instead of speaking of a language community, we conceive of a *linkage* of

communicating individuals, a concept that includes also representations of parts of the physical environment that may affect communicative phenomena.

9) Instead of contested definitions of language, we see observable behavior as communicative if it affects subsequent observable communicative or noncommunicative behavior of the same person or group.

10) Instead of seeing pragmatics as being concerned with language use, we see communicative behavior as changing the properties of people.

11) Instead of speaking of meaning being conveyed by language, we see communicative behavior as causing changes in the linguistic and nonlinguistic properties of people.

12) Instead of a concept of an internal grammar we see the properties of a communicating individual as structured in what we call an *individual plex*.

13) Instead of a concept of the language of a community, we conceive of a linkage as structured in a *linkage plex*.

14) Instead of saying that utterances are partly alike and partly different, and no two utterances are exactly alike phonetically, we talk about observable communicative similarities and differences of people, and observe that no two people are exactly alike communicatively.

15) Instead of proposing properties of language, we use standard reasoning from observed communicative similarities and differences of people and postulate properties of people structured in individual and linkage plexes and then test these theories against further observational and experimental evidence from people. In this way linguistics can become a science in the same sense as the physical and biological sciences, which investigate the physical, chemical, and biological properties of matter. This linguistics will investigate the linguistic properties of people, which is also a special case of studying the properties of matter.

In this paper I have tried to explain how the conflict of goals between following the grammatical tradition and following science has caused problems for linguistics for over a century and a half. Grammar and science are fundamentally irreconcilable. The incompatibility between science and grammar can no longer be ignored nor its ill effects in linguistics tolerated. If we want to develop a scientific linguistics, we must give science first priority over the grammatical tradition. A focus on language as an abstract entity introduced by assumption must be given up in favor of a focus on people. We must develop linguistic theories of people that do not lean for support on grammatical concepts but instead are a part of standard science. To do this we must reexamine foundational issues and formulate linguistic concepts and theory that can be tested at all levels, including the most fundamental level, against observational and experimental evidence.

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5. NOTE

* An earlier version of this paper was presented at the Eighteenth LACUS Forum 1991

SECTION 13

LANGAGE ET INFORMATIQUE

LANGUAGE AND THE COMPUTER

A PHONOLOGIST'S WORKBENCH

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University of Edinburgh, SCOTLAND

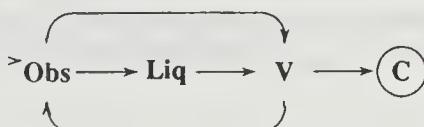
1 INTRODUCTION

The practising phonologist is frequently beset by two problems regarding data and analysis. First, a realistically sized corpus of data is difficult to maintain and access if it is stored on paper. Putting such a corpus online is a solution, but some sticky representational problems need to be solved first. Second, a realistically sized analysis is virtually impossible to check by hand. The widespread practice of testing a few interesting cases is highly unreliable and is no substitute for an exhaustive check. Here again, automation promises to provide a way out, provided that phonological analyses can be represented on computer.

In this paper we report on some ongoing research that is directed at solving these two problems in the context of a phonological grammar development environment (GDE). The primary aim of this GDE is to provide intelligent computational support to the working phonologist by (i) helping in the discovery of regularities in the data and (ii) exhaustively checking an analysis against the corpus and reporting errors.

2 FINITE-STATE PHONOLOGY

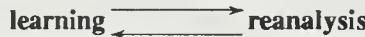
A STATE-LABELLED FINITE-STATE AUTOMATON (SFA) is a simple computational device consisting of a collection of labelled states connected to each other by arcs. Allowable initial states are marked with a ' $>$ ' and final states are circled. Here is a SFA which ensures that each word of our corpus must conform to the syllable canon Obs (Liq) V (C), where the C is only permitted word-finally.



Given suitable definitions for the classes Obs, Liq, V and C this SFA accepts the strings *clap* and *tablet*, since these can be processed by starting from the initial state and progressing through the network by following the arrows until the final state is reached. Bird & Ellison (1992) have shown how SFAs can be applied to autosegmental phonology. A TRANSDUCER is like an automaton except that its nodes are labelled with pairs. We shall use transducers to project information from segmental sequences to autosegmental tiers.

3 THE GRAMMAR DEVELOPMENT ENVIRONMENT

The model of grammar development we envisage is as follows. We begin simply with a corpus of language forms (i.e. words or phrases). We assume that the corpus is based on a linear transcription scheme such as the IPA or a roman orthography. The development process has two steps, executed in cycle:



3.1 Learning

The methods developed by Ellison (1992) for learning phonology provide a basis for the machine induction system we propose. These methods are based on the notion of MAXIMAL COMPRESSION (or MINIMAL INFORMATION) which arises out of Bayesian statistics (Solomonoff, 1964; Georgeff & Wallace, 1984; Li & Vitanyi, 1989). The fundamental idea is that a good generalisation about the data allows one to translate a more redundant representation into a less redundant one. If the generalisations and representations are automata then this translation process can be modelled by a transducer.

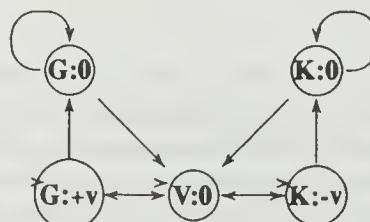
The learning begins with an automaton having a fixed shape, such as the three automata displayed on the following pages. Next, we randomly assign sets of alphabetic symbols to its nodes and then evaluate this automaton with respect to the corpus. We continue to explore the search space (using a strategy known as simulated annealing) until the most restrictive automaton is found. Now we provide some examples for assimilation, harmony and dissimilation, and show how transducers which use these generalisations produce more compact representations.

Assimilation

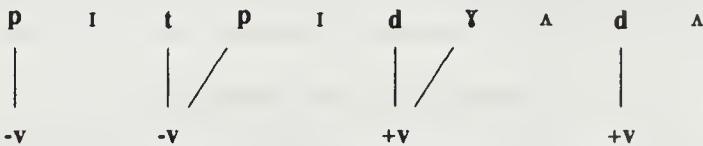
Obstruent clusters in Maltese Arabic must agree in voicing. We can express this generalisation with the following automaton. We use G to symbolise the set of voiced obstruents, and K the unvoiced ones.



This generalisation requires, in effect, that there are not several voice specifications in a cluster, but only one. The following transducer uses this generalization to project information from a segmental sequence to a voicing tier (0 is the null symbol).



The transducer assigns the feature [+v] to voiced consonants, but only supplies one such feature for each consonant cluster: the consonants in a cluster all share the same feature value. Similarly, the consonants in an unvoiced cluster must share a single feature for voicings, [-v]. In autosegmental terms, the above transducer amounts to the following, for the word in Maltese meaning *two days after tomorrow*.



Harmony

The automaton on the left below describes the front-back vowel harmony of Turkish. From this automaton, it follows that there are two kinds of vowel, let us label them [-f] and [+f]. We can then write turn the SFA into a transducer which captures the generalisations (displayed on the right).



As with assimilation, the harmony transducer projects a sequence of segments onto a single autosegment: the vowels of a harmony domain onto the value of the harmonising feature to which they belong.

Disharmony

The Caucasian language Georgian has a disharmony process restricting the occurrence of r. Only one r may occur in a word. We can express this with the following automaton, where \bar{r} is the set of segments not including r.



The automaton can be extended into a transducer by correlating the feature [+r] with the r segment, and no value with any other segment.



This transducer not only expresses the generalisation about Georgian words, but also uses this generalisation to form a concise encoding of the data. Words which contain r will be marked with a single value of the feature [+r], while words which do not contain r will have no value for this feature.

3.2 Reanalysis

The finite state transducers add information to the entries in the lexicon. This information is a partial specification of information in the most specific projection of the lexicon, and because the transducers code generalisations, the projections offer a more concise representation of the data. For example, consider the Turkish vowel harmony rule which we described earlier. We start with the surface representation of the word **evi**, *house* (*acc sing*), together with the results of a segregation transducer which has extracted the vowel plane.

$$\left[\begin{array}{cc} ph & e \\ V & e \end{array} \right] \left[\begin{array}{cc} ph & v \\ V & i \end{array} \right] \left[\begin{array}{cc} ph & i \\ V & i \end{array} \right]$$

We take the product of this automaton with the vowel harmony transducer, and obtain the following automaton giving the revised representation of the word.

$$\left[\begin{array}{cc} ph & e \\ V & e \\ f & + \end{array} \right] \left[\begin{array}{cc} ph & v \\ V & i \end{array} \right] \left[\begin{array}{cc} ph & i \\ V & i \end{array} \right]$$

Although this representation contains more information than the previous one, it contains less unpredictable information. The specification for the feature [f] translates into tight constraints on the sequence of vowels. With less independent information, our evaluation metric regards the new representation as an improvement on the old. The evaluation measure can be formulated in such a way that successive applications of the learning program will not discover the same generalisation; orthogonal generalisations are preferred.

4 CONCLUSION

The phonological model described here is sufficiently explicit to allow a direct implementation, which is currently under development. Integration with a model of syntax and semantics is also being investigated (Bird, 1992).

Although the computer is used to determine generalisations about the data and also to perform reanalysis, we do not regard these as solely the domain of the machine. Rather, human intervention in the analysis process is made as easy as possible, so that the user is able to perform comparisons of existing theories, use information not available to the machine, or develop theories which the machine does not prefer.

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**RENDRE COMPTE DE L'ACCORD
DANS UNE GRAMMAIRE COMPUTATIONNELLE DU FRANÇAIS***

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• La théorie de la Grammaire Syntagmatique Généralisée (GSG) [Gazdar et al. 1985] est une théorie formelle des langues naturelles qui présente un grand intérêt du point de vue de l'analyse automatique. Le formalisme déclaratif de la GSG permet de décrire de façon modulaire la grammaire d'une langue naturelle. Par l'interaction de principes généraux, la GSG permet de rendre compte de phénomènes problématiques des langues naturelles, les dépendances non-bornées et l'accord par exemple, que nous allons plus particulièrement examiner dans ce qui suit.

A l'aide d'un seul Principe d'Accord et de Contrôle, par lequel on établit une relation entre contrôleur et contrôlé, la GSG peut rendre compte des différents cas d'accord et ce, dans toutes les langues naturelles. Ce principe, bien que syntaxique par nature, détermine les termes de la relation à partir de bases sémantiques dont les caractéristiques rigoureuses permettent de donner une interprétation de l'accord dérivée par principes et non stipulée cas par cas.

Pour nous assister dans la tâche d'élaboration de notre analyseur morpho-syntaxique pour le français [Bouchard et al., sous presse], nous utilisons l'outil GDE [Boguraev et al. 1988]. Cet outil est conçu pour faciliter l'écriture des grammaires dans un formalisme proche de celui de la GSG. On peut cependant noter des différences entre l'outil et la théorie; en particulier, en GDE on doit programmer *explicitement* les principes de la GSG en termes de règles de propagation (PROPRULES).

Par exemple, la règle (1) décrit l'accord entre le syntagme nominal et le syntagme verbal.

- (1) PROPRULE Accord/SN_SV :
 $V3[SUJ +] \rightarrow N3, H3[SUJ -]$.
 $F(1) = F(2[AGR])$, F in TraitsAccord.

Cette règle énonce que les traits d'accord (ensemble 'TraitsAccord') de la première fille ($N3$) doivent être les mêmes que les traits d'accord véhiculés par le trait catégoriel AGR de la deuxième fille ($H3$) qui correspond au syntagme verbal.

- Notre grammaire de l'accord a une couverture assez large. Dans ce qui suit, à titre d'exemple, nous montrerons comment nous rendons compte de

l'accord de l'adjectif attribut avec le sujet puis de celui du participe passé avec 'avoir' dans une phrase comportant une extraction.

Nous ne détaillerons ici que les traits liés au phénomène de l'accord. L'ensemble 'TraitsAccord+Catégoriel' comprend les traits suivants, tous à valeur binaire (+,-): FEM, PLU, EGO, PTC, N, V. Le trait EGO à valeur '+' renvoie à la première personne. Le trait PTC à valeur '+' renvoie aux première et deuxième personnes [Tesnière 1959].

Prenons l'exemple suivant:

(2) Les meubles sont poussiéreux

L'adjectif "poussiéreux" dans le lexique porte le trait -FEM et n'est pas spécifié pour le nombre (trait PLU). L'auxiliaire quant à lui est noté +PLU sous le trait AGR et n'est pas spécifié pour le genre (trait FEM). La règle de propagation suivante réalise, au niveau des deux soeurs V1 et A3, l'unification des traits entre l'auxiliaire "sont" et l'adjectif "poussiéreux".

(3) PROPRULE Accord/Attribut/A3 :

$V2 \rightarrow H1[\text{SUBCAT être}, \text{AGR}], A3[\text{AGR}]$.

$F(1[\text{AGR}]) = F(2[\text{AGR}]), F \text{ in TraitsAccord+Catégoriel}$.

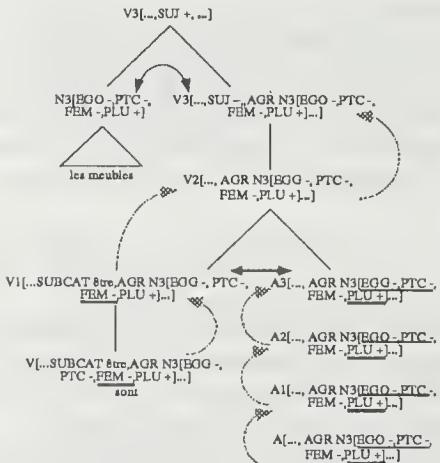


Schéma 4

Comme le montre le schéma (4), "poussiéreux" acquiert le trait +PLU, et "sont" le trait -FEM. Les traits d'accord passeront ensuite successivement de la tête V1 à sa mère V2, puis au V3[SUJ -]. A ce niveau, la règle de propagation (1) réalisera l'accord entre le SN sujet et le syntagme verbal.

Dans le cas particulier de l'extraction, un lien doit être établi entre le participe passé et le constituant extrait afin de pouvoir réaliser l'accord. C'est le trait catégoriel SLASH, utilisé pour lier les catégories extraites de leur site "naturel" de projection, qui servira à véhiculer les exigences du participe passé.

Nous illustrons d'abord le fonctionnement du SLASH en nous basant sur l'analyse de la phrase (5).

(5) Les étudiants que les policiers matraquent E manifestent

Le verbe 'matraquer' se construit généralement avec un complément N3. Dans l'exemple (5), son déplacement du site naturel où il est instancié laisse un trou. Le trait SLASH à valeur N3 "part à la recherche" d'une catégorie dont les traits seront les mêmes que ceux qu'il porte. On notera que les traits d'accord ne sont pas déterminés ici puisqu'on ne retrouve pas de participe passé.

Des règles de propagation permettent de faire passer les traits véhiculés par le SLASH de la position dans laquelle celui-ci est instancié, c'est-à-dire le trou, jusqu'à la position dans laquelle se réalisera l'unification des traits catégoriels (N et V). Ils passeront donc successivement du N3 au V1, du V1 au V2, du V2 au V3[SUJ -], puis du V3[SUJ -] au V3[SUJ +], position dans laquelle ils vont trouver le pronom relatif (schéma 6).

Cette transmission de traits nous est très utile pour réaliser l'accord entre le participe passé utilisé avec l'auxiliaire 'avoir' et le complément extrait dans une phrase telle que celle présentée en (7).

(7) Les étudiantes que les policiers ont matraquées E manifestent

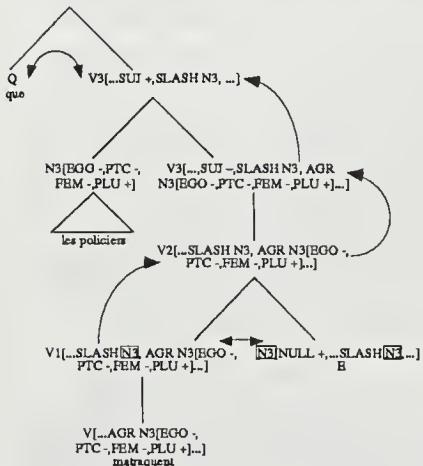


Schéma 6

(première fille) et les traits d'accord et catégoriels véhiculés par le trait SLASH de la deuxième fille (la relative, ici identifiée par la catégorie Q2). Il y donc unification au niveau des traits +N et -V, et des traits +FEM, +PLU, -EGO et -PTC.

(8) PROPRULE Accord/Relative :

$N1 \rightarrow H1, Q2[SLASH]$.

$F(1) = F(2[SLASH]), F \text{ in TraitsAccord+Catégoriel}$.

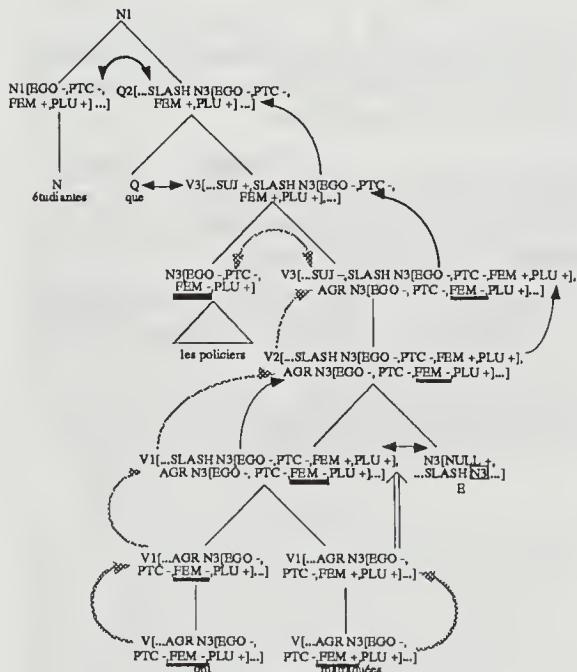


Schéma 9

Même si dans le schéma (6) l'unification s'effectue au niveau de la phrase en 'que', ici le trait SLASH doit être propagé au niveau encore plus élevé afin de réaliser l'accord entre l'antécédent 'étudiantes' et le participe passé 'matraquées'.

Dans ce cas précis, on notera également que le SLASH doit véhiculer non seulement les traits catégoriels mais aussi les traits d'accord genre, nombre et personne.

La règle de propagation 'Accord/Relative' en (8) stipule l'unification des traits d'accord et des traits catégoriels (ensemble 'TraitsAccord+Catégoriel') entre le N1 antécédent

Le schéma (9) illustre les propagations qui sont nécessaires pour rendre compte de la phrase (7). Montrons d'abord l'accord entre le sujet, "les policiers" et l'auxiliaire, "ont".

C'est au niveau des deux soeurs N3 et V3[SUJ -] qu'est réalisé cet accord entre les traits du N3 sujet et ceux véhiculés par le trait AGR du V3. Le trait AGR est propagé à partir de l'auxiliaire jusqu'au V3 formant le syntagme verbal sans sujet. Dans le schéma, les flèches grises illustrent cette transmission de traits.

Le trait FEM non spécifié originellement pour "ont" (dans le lexique) se retrouve sur l'auxiliaire, résultat de cette unification.

Passons maintenant à l'accord entre le participe passé, "matraquées" et le N1, "étudiantes". La transmission du SLASH s'effectue de la même façon que dans le schéma 6 (flèches noires). Rappelons que, contrairement à l'exemple précédent, le trait SLASH, déjà au niveau du V1, véhicule, en plus des traits catégoriels (provenant du N3 complément), les traits de personne, de genre et de nombre. Ces derniers proviennent de fait du trait AGR du participe passé. Partant du trait AGR au niveau du V participe passé, ces traits passent ensuite (flèche grise) au V1 mère, soeur du V1 de l'auxiliaire puis sont transmis (flèche double) au trait SLASH du V1 chapeautant l'auxiliaire et le participe passé.

Comme on peut le constater, au niveau du V3[SUJ -] (et du V2) on retrouve à la fois le trait SLASH à valeur N3[FEM +,PLU +] (exigence d'accord du participe passé) et le trait AGR à valeur N3[FEM -,PLU +] (exigence d'accord de l'auxiliaire).

Le trait SLASH poursuit alors son 'escalade', trouve d'abord le pronom relatif, puis l'antécédent nominal "étudiantes" avec lequel une unification est effectuée selon la règle de propagation 'Accord/Relative' présentée en (8).

Nous avons choisi ces cas particuliers d'accord parce qu'ils sont représentatifs des mécanismes utilisés dans la grammaire et qu'ils illustrent de façon précise l'interaction parfois complexe des règles et des principes.

Cette complexité rend encore plus nécessaire le développement de grammaires computationnelles à large couverture afin de mieux évaluer la portée et l'exactitude des hypothèses théoriques.

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THE FORMATION OF SELF-CONTROL HABITS ON THE BASIS OF CAL-PROGRAMS FOR TEACHING ENGLISH

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1. INTRODUCTION

This paper reports further analyses of a study of psycho-linguistic aspects of the self-control mechanism on the basis of CAL-programs for which certain findings have already been published (Derkatch, 1988:65).

Here the concern is to examine the various principles of self-control realization by means of a set of exercises aimed at editing the erroneous answers, their detection and further correction.

2. METHOD OF INVESTIGATION

Specifically the analyses seek to determine what measures or sets of measures have independent effects on achievements of the first-year students of the University studying English as a foreign language. Two samples ($N = 323$ and 485) are analysed separately to test the possible generality of the results obtained.

The results presented comprise the set of exercises aimed at editing wrong answers by the student himself at his own pace. The given research supports the notion that computer-assisted learning must be obviously based on the typical lexico-grammatical errors made by the students in order to detect and consequently to prevent the typical mistakes in teaching foreign languages. Findings of this relationship are of significance because they provide the necessary facilities both for the student and teacher in error prediction.

This explanation can be extended to account for the difference between the typical errors of the students studying English in Canada and the Ukraine. It's quite possible to foresee in the software different types of the computer's reaction on the quality of the student's work. If the student fails in identifying the error in the text presented by himself,

then the computer provides the correct answer; or the computer can easily point to the wrong correction of the mistake and then to supply the instruction how further to proceed with the detection; it can also point to the separate word or a group of words containing the mistakes.

In addition, the significant effect - the total time necessary for each student for error detection.

The development and enhancement of self-control habits through the modelling and structuring of computer programming are predicted on the ability to access and engage one's metacognitive skills. In this study 1st, 2nd year University students were given a series of increasingly more complex tasks on editing they had to perform themselves and then teach the computer to perform.

The computer became both the receiver of the students' strategies and served as a model and a standard. Subjects analysed, corrected, adopted and changed those strategies according to the following instructions:

1. Detect the mistakes planted in a written text, reproduced on the screen, systematize them using the following symbols: St - Style; wo - word-order; gr - a grammar mistake; lex - a lexical mistake; sp - a spelling mistake. Print the correct version of the detected words on the screen.

2. Define the erroneous usage of the prepositions. Print the required ones.

3. Find out the wrong usage of the Present Perfect Tense, the Past Simple Tense. Print the correct version.

4. Translate the following sentences from Russian into English. Compare the computers answers with your own ones. Correct our mistakes if any.

3. RESULTS

Proficiency increased and strategies were more easily adopted to some other tasks and problems. Completion of suggested CAL-exercises increased significantly and the number of erroneous answers as well as the number of trials has considerably decreased.

There were vivid differences in the types of errors made by the subjects. It gives the ground for the author to compile the Ukrainian-English Interference Dictionary of typical lexico-grammatical errors.

Thus, the experimental data obtained prove that the development of self-control habits is quite efficient on the basis of CAL-programms for teaching English compiled on typical lexico-grammatical mistakes of the students.

REFERENCE : Derkatch L.N. (1988), Psycho-methodological aspects of self control mechanism formation under bilingualism, Dnepropetrovsk: Dnepropetrovsk State University, 65-71.

DE LA PREDICTIBILITE AU DETERMINISME

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L'ordinateur, outil technologique, s'affirmant de plus en plus en Occident, comme outil indispensable au progrès des divers domaines scientifique, éducationnel et même littéraire, n'arrive pas encore à prendre sa place dans le monde arabe.

Dans le projet de l'ACCT pour la construction d'une interface arabe, il nous fallait intégrer un composant pour analyser les demandes des utilisateurs. Il s'avère que ce composant gagnerait énormément en matière de temps et d'efficacité avec un pré-analyseur comme celui proposé dans cet article.

L'objet de cet article est de mettre en évidence la relation des résultats des études psycholinguistiques et leur impact sur le développement de la linguistique computationnelle. Notre approche principalement syntaxique permet à l'ordinateur d'avoir une vue d'ensemble de la phrase reproduisant ainsi le modèle de la compétence de l'homme

L'être humain ne peut fonctionner comme les Parsers présentés par les différentes équipes, c'est-à-dire diviser la phrase en mots en se basant sur les espaces qui séparent les mots et ensuite aller chercher dans un dictionnaire ou un lexique les traits aussi bien syntaxiques que sémantiques correspondants. On aurait pris trop de temps pour désambiguïser toutes les ambiguïtés lexicale et graphique, surtout que ces dernières dominent dans la langue arabe écrite non-voyellisée. Il s'agit bien alors d'utiliser des stratégies bien définies qui permettent de déterminer l'une ou l'autre lectures adéquates au contexte. Nous soutenons fortement les concepts avancés par Clark et Clark (1977) qui voient que l'homme a à sa disposition un jeu de stratégies qui lui permettent de segmenter la phrase en constituants, de classifier, et de catégoriser les différents éléments. Les stratégies proposées par les auteurs ont été conservées avec une légère modification concernant premièrement les catégories des "functions words" et deuxièmement l'utilisation surtout des préfixes comme dépisteurs de structures

Nous appelons **DÉPISTEURS** tout mot qui permet de prédire le chemin à parcourir dans l'analyse de notre phrase. Sa fonction serait en

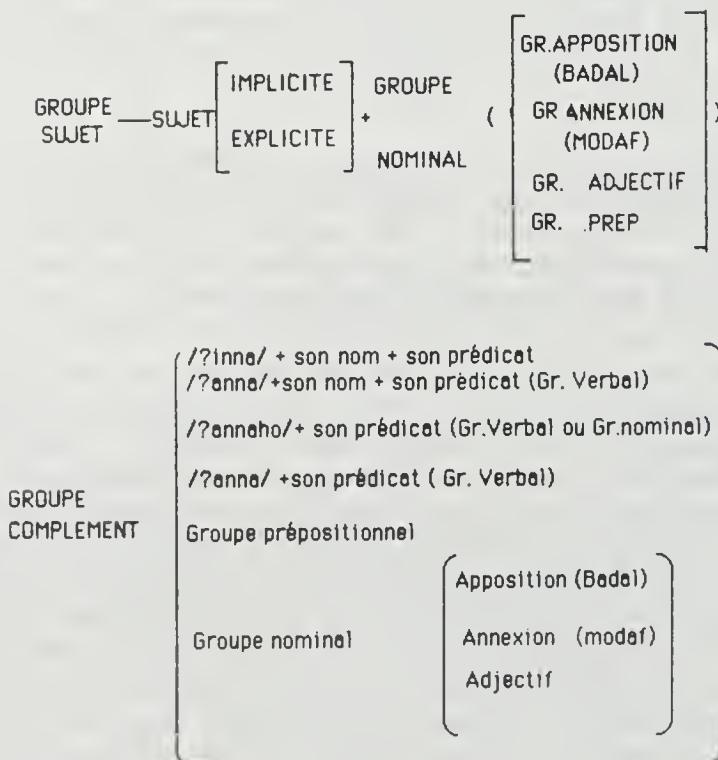
premier lieu de déclencher certaines structures. Par ce même biais, il nous sera possible de prédire les catégories de certains mots. Cette approche syntaxique nous permet donc de reconstruire la structure de phrase car toute langue répond à une organisation (Kess 1986). Et cela nous permet d'optimiser l'utilisation de l'information morpho-syntaxique en vue d'une interprétation sémantique correcte.

Les dépisteurs pour nous sont les prépositions, les conjonctions, les auxiliaires de négation et les déterminants, la présence de nom propre. Leur ordre n'est pas, ad hoc. Nous nous expliquons: les déterminants, par exemple, ne prennent leur force comme dépisteurs qu'après les autres. La place des mots outils permet non seulement d'identifier les frontières des constituants mais aussi la fonction de ceux-ci.

Nous avons donc décidé de travailler sur un corpus authentique pour nous assurer de la validité de notre analyse pilote. Nous avons relevé des phrases verbales de la première page de Alahraam.

1 .LES STRUCTURES ANALYSÉES

La forme canonique des phrases traitées par l'ordinateur est:
PHRASE VERBALE ----- VERBE+ GROUPE SUJET + GROUPE COMPLEMENT



2. DESCRIPTION DE L'ALGORITHME

La première étape de l'analyse consiste à déterminer les constituants principaux de la phrase; la deuxième donne l'analyse et la catégorisation des mots. Pour répondre à ses besoins notre algorithme comporte quatre composants principaux:

2.1. Segmentation de constituants

Le test des dépisteurs permet de délimiter les constituants, car ce qui apparaît immédiatement avant le mot clé forme le groupe sujet et ce qui apparaît après le mot outil c'est le groupe complément. S'il n'y a pas de mot qui apparaît avant ces dépisteurs, c'est que le sujet est implicite dans le verbe (mostater).

Il reste donc à segmenter la structure interne des différents groupes. S'il n'y a pas de dépisteurs, on a recours à d'autres tests, tels que la présence d'un mot propre. Dans le cas échéant, on passe au 2ème test: la non-présence du déterminant (الـ) ce qui permet de prédire la fin du groupe sujet.

Exemple : اقام # الرئيس (مبارك) # مأدبة عشاء لهيف مصر

(Le Président Moubarak a donné un dîner en l'honneur de l'invité de l'Egypte)

2.2. Analyseur du verbe

Le premier mot est toujours un verbe. L'analyse du verbe se fait à partir des affixes qui permettent de déterminer: le temps, le cas du verbe, etc.

2.2.1. Le verbe au présent

Le premier test consiste à vérifier la présence des préfixes du présent. Le deuxième test pour le verbe a lieu si le verbe débute avec le préfixe [t] car il faut avoir recours soit à l'utilisateur soit à la pré-édition pour vérifier si une sheddah existe sur l'avant-dernier graphème. S'il n'y a pas de sheddah, le verbe est au passé, si sheddah il y a, le verbe est au présent. Si le verbe fait partie du constituant complément qui débute avec les mots outil / ?inna / ou / ?innaho / la marque de flexion du verbe sera déterminée par le mot qui précède le verbe comme: [laa, ?anna, lam, qad]. L'analyseur indique que le verbe est au présent au cas nominatif.

2.2.2. Le verbe au futur

Il y a un seul test pour voir si le verbe est au futur. Tester les graphèmes préfixes selon l'ordre suivant [saya] (سي), [saa] (سـ), [sana] (سنـ), et [sat] (ستـ). Si ces préfixes existent, le verbe est analysé au futur.

2.2.3. Le verbe au passé

Si le verbe n'est ni au présent ni au futur il est considéré comme au passé, mais reste à vérifier son cas par l'intermédiaire des suffixes .

2.3. Analyseur du constituant sujet

Le groupe sujet peut-être soit un seul mot, soit un groupe de mots comportant jusqu'à dix mots. Le premier mot après le verbe est le sujet qui

est analysé comme ayant la flexion casuelle du nominatif (مُفْتَحٌ) mais il y a encore un autre test pour vérifier si le cas est représenté par la présence du graphème (و), s'il y a un suffixe [uun] (وُنْ) ou par la flexion du cas nominatif la dammah.

2.4 L'Analyseur du constituant complément.

L'étude du groupe complément se fait en deux étapes: définir les frontières de ce dernier, ensuite déterminer ses membres et leur fonction. Nous aurons recours à plusieurs composants:

Le segmentateur, l'analyseur du nom et l'analyseur du complément des outils.

3. CONCLUSION

Nous avons essayé de montrer que pour construire un parser, dans une première étape, il est possible de se passer d'un dictionnaire si l'on réussit à optimiser l'information tant syntaxique que morphologique. Notre point de départ consiste à se baser sur des dépisteurs permettant de débrouiller les chemins multiples, auxquels une machine, comme un apprenant, doit faire face pour comprendre une phrase.

"Les indications sur la direction de la phrase, les attentes après certaines occurrences auront amené l'apprenant à formuler des hypothèses. Que celles-ci soient contradictoires voire erronées est moins grave que de n'en point formuler du tout, ce qui est fréquemment le cas dans la procédure du mot à mot. L'essentiel qu'elles soient formulées sur l'ensemble de la phrase. Les connaissances morphologiques rigoureuses viendront alors dans un deuxième temps lever les doutes". (C. Audebert and A. Jaccarini (1986)).

Cette citation résume notre point de vue dans la mesure où nous ne prétendons nullement que l'on peut se passer d'implanter un dictionnaire dans tout logiciel qui aurait pour but d'arriver à une seule solution dans ce treillis de structures possibles. Il faut écarter le surplus d'information pour choisir la bonne voie.

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**REPRESENTATION OF TEMPORAL KNOWLEDGE IN A
DISCOURSE :
THE CASE OF TEMPORAL CONJUNCTIONS**

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1. INTRODUCTION

This research extends Sowa's conceptual graph approach (1984) thanks to the introduction of the notion of time coordinate systems in the form of agents' perspectives and temporal localizations. The model may represent several types of temporal situations (events, processes, states etc.) which are related together and linked with temporal perspectives and localizations by means of temporal relations. We use an extension of Allen's temporal relations. This approach can be used to explain several linguistic phenomena, such as the generation of verb tenses, the use of indexicals and anaphors, the use of temporal conjunctions. We will mainly concentrate on this latter subject. Section 2 briefly introduces the notions of time intervals, temporal object and situation. Section 3 presents the notions of temporal perspective and localization. Section 4 suggests a way of modelling temporal conjunctions within this framework.

2. TIME INTERVALS, TEMPORAL OBJECTS AND SITUATIONS

All temporal structures are associated with a time interval. An *elementary time interval* is a continuous sub-set of TR, the time axis. The elementary time interval is specified by a list of parameters: the begin-time BT and end-time ET which are the lower and upper bounds of the time interval on the TR axis; the time scale TS used to measure the bounds, the duration of the time interval DU and the duration scale DS.

A *temporal object* is a concept that is characterized by a time interval: i.e. "day", "week", "month", "year". Graphically we represent a temporal object with a rectangle decomposed in two parts. The rectangle represents the corresponding time interval. In the upper part of the rectangle we indicate the object description OD in the form of a conceptual graph, as well as the relevant parameters of the object time interval OTI. In the lower part of the rectangle we represent the object propositional content in the form of temporal objects or situations related to the embedding rectangle by a relation ("part of" or a "temporal relation").

In figure 1 to 1 represents a temporal object.

The *temporal situation* construct enables us to represent at a semantic level several temporal categories : states, processes, events etc. (Vendler 1967, Desclés 1989, Moens Steedman 1988). A temporal situation is associated with a temporal interval which situates the situation on a time axis. Graphically we represent a temporal situation with a rectangle decomposed in two parts. The rectangle represents the corresponding time interval. In the upper part of the rectangle we indicate the situation description SD, as well as the relevant parameters of the situation time interval STI. In the lower part of the rectangle we represent the situation propositional content SPC in the form of a conceptual graph. In figure 1 we have two temporal situations events ev1 and ev2.

Temporal situations and objects may be related together by *temporal relations*. Extending Allen's temporal relations (1983), we consider two primitive relations called "BEFORE" and "DURING" defined as follows. Given two intervals X and Y, the relation BEFORE(X, Y, Lap) indicates that interval X takes place before interval Y and that the distance between the end of X and the beginning of Y is measured by Lap. The relation DURING(X, Y, DB, DE) indicates that X is contained in Y. The parameter DB indicates the distance between the beginning-time of Y and the beginning-time of X, and the parameter DE indicates the distance between the end-time of X and the end-time of Y, measured on the time axis. Using the DURING and BEFORE relations, we can define all the temporal relations proposed by Allen (1983). The parameters Lap, DB and DE indicate the *relative localization* of two intervals. Temporal relations are represented as circles linking the rectangles representing time intervals.

3. TEMPORAL PERSPECTIVE AND LOCALIZATION

When producing a discourse, an agent considers his own spatio-temporal localization as the main coordinate system, which sets a reference for localizing other temporal situations. In a discourse the *narrator's perspective* sets the main time coordinate system. We represent graphically a narrator's perspective as a rectangle composed of two parts. In the upper rectangle, we indicate the narrator's perspective description (in the form of a conceptual graph [PERSON: narrator]<- (AGNT) <- [SAY] -> (PAT) ->[PERSON: reader]) and its time interval parameters. In the lower rectangle we indicate the perspective set. The lower rectangle corresponds to the temporal scope of the perspective. The sides of the lower rectangle symbolize the time interval associated with the time coordinate system origin. The temporal relations link the side of the rectangle with the rectangles representing the temporal situations, localizations and perspectives which are elements of the narrator's perspective set. The narrator's perspective may be considered as an extension of Reichenbach's S marker. A *temporal localization* is an extension of Reichenbach's R marker. It is used to localize temporal situations with respect to the narrator's perspective or other

localizations. We represent graphically a temporal localization as a rectangle composed of two parts. In the upper rectangle, we indicate the temporal localization description and time interval parameters. In the lower rectangle we indicate the temporal localization set. The lower rectangle corresponds to the temporal scope of the localization. The sides of the lower rectangle symbolize the time interval associated with the time localization. The temporal relations link the side of the rectangle with the rectangles representing the temporal situations, localizations and agent's perspectives which are elements of the temporal localization set.

Figure 1 gives an example representing the sentence: "John married Helen on January 23 1991, before the day when a big storm hit Quebec-city".

4. REPRESENTING TEMPORAL CONJUNCTIONS

In a discourse temporal conjunctions relate sentences which represent temporally linked situations. In our approach temporal conjunctions are represented as temporal relations set between temporal situations or objects. Condamin (1990) studied French temporal conjunctions. She distinguished conjunctions whose formulation does not contain a noun (i.e. when, while, before, during), and conjunctions which contain a noun (i.e. the day when, the year after). In our approach, the first category of conjunction is represented by temporal relations, whose parameter indicates the characteristic of the conjunction (see the example of "before" in figure 1). The second category of conjunction is represented thanks to the use of a temporal object that contains a relation relating it to the temporal situation which is introduced by the conjunction (see the example of "the day when" in figure 1).

The table in figure 2 presents the correspondance between French temporal conjunctions and their interpretation in the model: Columns X and Y correspond to the situations which are respectively at the origin and at the destination of the temporal relation. Column "relation" gives the type of the temporal relation corresponding to the conjunction.

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Figure 1: Representation of "John married Helen on January 23 1991, before the day when a big storm hit Quebec-city"

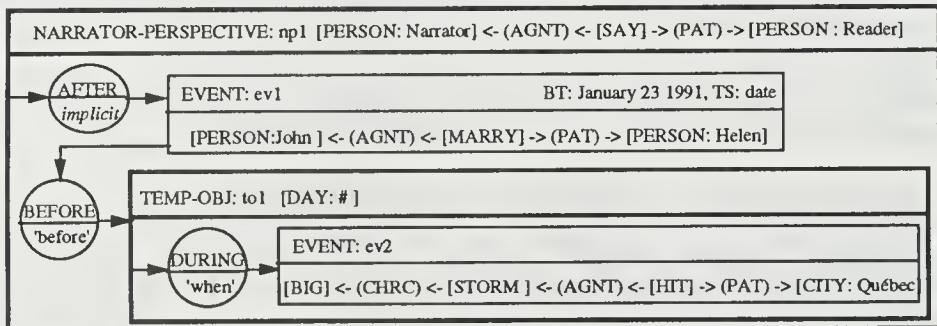


Figure 2: Interpretation of French temporal conjunctions
 (In the sentence, P corresponds to the main clause, S corresponds to the subordinate clause which is introduced by the temporal conjunction)

		X	Relation	Y
tandis que	while	S	DURING EQUAL	P
pendant que	while	S	DURING EQUAL	P
pendant que	while	S	DURING EQUAL	P
durant que	while	S	DURING EQUAL	P
aussitôt que	as soon as	S	START	P
dès que	as soon as	S	START	P
à peine que	as soon as	S	START	P
tout de suite que	as soon as	S	START	P
jusqu'à ce que	until	P	MEET	S
en attendant que	until	P	MEET	S
avant que	before	P	BEFORE	S
sans attendre que	without waiting for	P	BEFORE	S
d'ici que	until	P	MEET	S
d'ici à ce que		P	MEET	S
après que	after	S	START	P
à présent que	now that	S	START	P
maintenant que	now that	S	START	P
depuis que	since	S	START	P
aujourd'hui que		S	EQUAL	P
comme	as	S	DURING	P
alors que	when	S	DURING	P
en même temps que	at the same time as	S	EQUAL	P
au fur et à mesure que		S	EQUAL	P
à mesure que	as	S	EQUAL	P

LINGUISTIC TERMS AND THE COMPUTER

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1. TOPIC ISSUE

Particularly on the background of the present explosion of terminology in each field in the science of language, computational linguistics and linguistic communication technology, as well as general comprehension and communication in linguistics, call, first of all, for a very good general knowledge and a correct approach of the meaning of the terms one operates with.

For computational linguistics, linguistic terminology is a totally new and uninvestigated topic. In the context of nowadays interdisciplinarity, this subject matter, with all its range of issues, gets highly important, especially, in this field, for computational semantics, computational lexicography and machine translation, so that linguistic texts could rightly bear a computational approach. For the first time now, one brings it into discussion by an analysis of the semantic process of a potential automatic translation of linguistic terms in a text, whose summary is presented in this paper:

2. MATHEMATICAL SIDE

For a more detailed accurate pragmatic analysis of the semantic process of machine translation of linguistic terms in a text, one has to consider linguistic terms in a general, rather formal, mathematical classification on the criterion form-meaning difference. The classification is valid for any bilingual system of linguistic terminology and it represents the background for further investigation steps into this subject matter. Such a classification should be of the following type (here are some examples of linguistic term categories excerpted from it):

If considering :

- X, Y, Z, P, Q, R = linguistic terms;
- $X_F, Y_F, Z_F, P_F, Q_F, R_F$ = the form of the linguistic terms
- X, Y, Z, P, Q, R;

- $X_M, Y_M, Z_M, P_M, Q_M, R_M$ = the meaning of the linguistic terms
 X, Y, Z, P, Q, R ;

- ϕ = lack of an exact equivalent linguistic term, implying the necessity of an explanation by a paraphrase in the target language;
- $=:$ equal to;
- \neq : totally different from;
- \dagger : partially different from,
one, consequently, can get the following linguistic term categories:

- a. X_F (basic language) = Y_F (target language)

$$X_M = Y_M$$

- i.e. identical or similar form - identical meaning;

- b. $X_F \neq Y_F$

$$X_M = Y_M$$

- i.e. different form - identical meaning

- c. $X_F = Y_F$

$$X_M \neq Y_M$$

- i.e. identical or similar form - different meaning

$$\text{c.1. } X_M \neq Y_M$$

$$X_M = Z_M$$

$$\text{c.2. } X_M \neq Y_M$$

$$X_M = \phi$$

$$\text{c.3. } X_M \neq Y_M$$

$$X_M = Z_M$$

$$= P_M$$

$$= Q_M$$

= ϕ - depending on the context;

etc.;

etc.

3. LEXICOGRAPHIC SIDE

In a machine-aided translation, the two basic linguistic lexicographic aspects that are to be considered are syntax and semantics. Unlike syntax, semantics does not comprise one to one relationships between its elements and this makes it more difficult for the computer. Thus, the transfer from the metalinguistic code of one language to that of another by the aid of the computer has to be based upon the existence of a computer dictionary containing instructions on the grammar of the two languages and on the meaning of the lexical items in each language. Moreover, in the case of a

machine translation of linguistic texts, due to the many particular problems raised by linguistic terminology, as well as for the sake of an accurate operation with linguistic terms, the translation supposes, besides the use of the ordinary bilingual computer dictionary just mentioned, a specialized bilingual computer use dictionary of linguistic terms, which does not exist at present in the world. A special paper presenting a project of it is absolutely necessary to bring out quite soon.

However, a brief scheme with the semantic principles for its compiling according to the above linguistic term classification can be drawn here. This type of dictionary serves to the getting of semantic information about a linguistic term in the text, for the purpose of its machine translation .

Thus, for the term categories mentioned at 2., one gets the following lexicographic semantic principles for this dictionary compiling:

- a.: one records the translation of the meaning of the term in the basic language by the corresponding equivalent term in the target language;
- b.: idem a.;
- c.: c.1.: one records the meaning that corresponds to the term in the basic language;
- c.2.: one gives a paraphrastic translation of the term in the basic language;
- c.3.: one records the translation of the multiple meanings of the term in the basic language by the corresponding equivalent terms in the target language, depending on the context (one establishes the essential features of the context, so that it can get automatically recognized); in the case of the unexistence of an exact equivalent of the term in the basic language, one gives a paraphrastic translation of the term, pointing out the context in which such a situation can appear;

etc.;

etc.

The application of each principle also depends on the linguistic term semantic peculiarities in the languages to specifically operate with.

4. COMPUTER PROGRAMMING SIDE

According to the term classification at 2. and based on the necessary lexicographic material, one can set up the algorithm for a machine translation of linguistic terms in a text, establishing for each category a specific appropriate translating procedure. The algorithm is valid for any individual bilingual system to be applied, but it has to be particularized to the specific linguistic features of the languages one operates with.

Thus, for the term categories mentioned above, for instance, the algorithm scheme is the following:

- a.: one takes out from the dictionary the term equivalent in the target language;

b.: idem a.;

c.: c.1. idem a.;

c.2. one uses between quotations marks the term, under the form in which it appears in the basic language, taking out from the dictionary the explanation of the meaning of this term, under the form of a paraphrase, used as a note in the text or as a footnote or a backnote to this translated text;

c.3. idem a., in case of the existence of an exact equivalent term in the target language (the equivalent term is established according to the context), or idem c.2., in case of the unexistence of an exact equivalent term in the target language. The context needs a special particular mention mark and a program indication in the algorithm in order to be automatically recognized and so that the equivalent term could be correctly chosen.

etc.;

etc.

There is no much a computer program at present, and no machine translation of linguistic texts has been done so far.

Furthermore, there can occur a multitude of particular term translation difficulties, especially with terms with lack of interlinguistic equivalence, with have to be considered by specialists, analysed and solved. They can represent the subject matter of another similar special article meant to specifically point them out and analyze them.

5. CONCLUSIONS

Consequently, one should carry on this study and make a specific application, in the future, to, at least, two major international languages; English and French. Thus Canada would be the most appropriate country to do it, especially according to the particular technological details of the North-American computer system.

In conclusion, computer translation of linguistic texts still remains a task of the future. This paper has been just one steps for its forwarding. In this sense, the recommendation holds true, which was given by some specialists in computational linguistics as far as the relation between linguistics and information science is concerned: "The only conclusion is a general one: namely, that it is evident that too little is known about either linguistics or information science to justify dogmatic assertions about the relation between them. This conclusions immediately leads to one recommendation: go and find more about them." (Jones, Kay 1973: 244).

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DES RESEAUX SEMANTICO-TERMINOLOGIQUES POUR DES BANQUES DE DONNEES TERMINOLOGIQUES INTELLIGENTES

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Les banques de données terminologiques (BDT) n'ont cessé de croître en nombre et en taille depuis leur création. Il faut réfléchir aujourd'hui à un mode d'interrogation approprié à cette échelle.

1. CONTEXTE LINGUISTIQUE

Dans les bases de données classiques, des recherches sur les éléments d'une classe (parties d'un objet, notions subsidiaires rattachées à une notion principale...) sont impossibles si ce n'est au prix prohibitif d'un parcours exhaustif – humainement inconcevable – de toutes les entrées de la base.

Les bases de données relationnelles ont permis de réintroduire la notion de système, notion inhérente à la langue. Rappelons que pour Saussure "la langue est un système dont tous les termes sont solidaires et où la valeur de l'un ne résulte que de la présence simultanée des autres". E. Wüster et les pères fondateurs de la terminologie partagèrent ce point de vue en affirmant qu'un terme n'a d'existence que dans un système terminologique, système qui lui-même ne peut découler que d'un système conceptuel sous-jacent.

Le système conceptuel est en fait la résultante de trois systèmes : le système des entités géré par les lois de la nature, le système des concepts géré par les lois de la pensée et le système linguistique géré par les lois du langage.

2. LES RESEAUX SEMANTIQUES (RS)

Envisager une formalisation des connaissances dans un système computationnel revient à favoriser la représentation aux dépens de la signification et les réseaux sémantiques se veulent précisément être un formalisme qui cherche à recréer une forme de signification à partir d'un cheminement dans une représentation.

Les RS, dans l'esprit de R. Quillian, leur créateur en 1968, permettent, par des mécanismes d'héritage de propriétés de dresser des hiérarchies et des taxonomies de concepts ainsi que de marquer des proximités sémantiques entre concepts. Les RS sont fondés sur les notions de classes d'objets et de représentants typiques de ces classes. Les propriétés des objets représentés sont des propriétés discriminantes plutôt que descriptives.

Les travaux menés depuis plus de vingt ans sur les RS ont donné lieu à la création de divers types de réseaux dont, en particulier, les graphes conceptuels de Sowa, les réseaux à propagation de marqueurs, les réseaux

sémantiques partitionnés ainsi que les frames de Minsky ou les scripts de Schank.

Les termes, représentants de concepts, sont des objets qui ont, à la fois, les caractéristiques nécessaires pour s'adapter à une description en réseau et quelques caractéristiques spécifiques qui justifient l'introduction d'un formalisme propre.

3. SPECIFICITES DE L'APPROCHE TERMINOLOGIQUE

La terminologie, domaine d'étude que l'on place au carrefour de la science de la documentation, de l'ontologie, de la logique, de l'anthropologie culturelle et de la linguistique, a pour vocation de décrire des systèmes conceptuels d'ordre scientifique ou technique, voire juridique ou administratif. Elle étudie les concepts d'un point de vue onomasiologique allant du concept au terme.

Une terminologie est un système structuré de termes appartenant à un domaine et qui reflète une organisation conceptuelle (de Bessé 1990). Cet ensemble conceptuel est constitué de relations qui peuvent être exprimées par des hiérarchies, des réseaux ou d'autres types de liens logiques (Lerat 1990).

Le travail du terminologue est, d'une part, un travail de classement et, d'autre part, un travail de caractérisation et de description par référence à l'objet que le terme dénote. Un terme donné est ainsi défini par un générique et un spécifique, le générique le plaçant dans une classe, le spécifique le distinguant des voisins de la même classe.

La terminologie s'occupe en fait de stéréotypes d'objets. Toutes les exceptions ou particularités individuelles sont balayées des définitions.

Dans une hiérarchie taxinomique d'objets classés par niveaux d'hyperonymie, certains objets sont plus typiques que d'autres, certains plus spécifiques et les autres sont généralement des génériques.

<u>Exemples</u>			
Objets génériques	{ végétal plante		connaissance connaissance opératoire
Objet de base	arbre		règle
Objets spécifiques	{ chêne chêne vert chêne vert méditerranéen (...) (Kleiber 1991)		règle d'inférence règle d'inférence déductive (...)

Les objets génériques désignent des catégories qui possèdent des propriétés générales, souvent descriptives et peu discriminantes. Ils représentent le niveau superordonné.

L'objet de base représente le niveau de base. C'est celui qui, dans sa définition, possède le plus grand nombre d'attributs. Il hérite, bien entendu, des caractéristiques des superordonnés, mais surtout, sert de référence à tous les objets spécifiques – et ils peuvent être très nombreux – qui s'y rattachent. Ainsi, à l'objet "règle" en IA, on peut rattacher plus de trois cents objets spécifiques, tous ou presque définissables à partir de l'objet de base et d'un

trait distinctif. L'objet de base est également le représentant typique de la catégorie.

Le niveau de base est, quoiqu'il en soit, le plus informatif. Pour reprendre un exemple de E. Rosch, si l'on compare animal, chien et épagneul du point de vue des informations, il est incontestable que c'est au niveau de chien que la plus grande partie des connaissances se trouve stockée. Animal s'accompagne de quelques traits généraux et épagneul ne se distingue de chien que par quelques traits supplémentaires, l'essentiel de ses traits étant hérité de chien (Rosch 1976).

[Kleiber, 1991] parle, à juste titre, de "saillance" du niveau de base sur trois plans : la perception (identification rapide), la fonction et la communication (mots courts et communs).

Il nous semble évident qu'un modèle de représentation sémantique, fondé sur des hiérarchies et des règles d'héritage de propriétés, ne peut occulter ces niveaux de représentativité et d'informativité des objets d'ordre scientifique.

4. LES RESEAUX SEMANTICO-TERMINOLOGIQUES (RST)

Les RST sont, dans notre intention, un moyen de représenter, à l'intérieur d'un domaine scientifique ou technique, les notions de concept, de classe, de catégorie, de typicalité et de filiation. Les RST ont donc la double vocation de "grouper" et de "différencier", la fonction de "regroupement" se concrétisant sous la forme de "liens associatifs" et celle de "différenciation" sous la forme de "liens distinctifs". Dans un premier temps, nous avons défini six liens (4 associatifs et 2 distinctifs) que nous considérons comme primitifs c'est-à-dire applicables à tous les domaines terminologiques :

- ◆ liens associatifs : SORTE-DE, PARTIE-DE, FONCTION-DE, PROXIMITE-DE;
- ◆ liens distinctifs : CONTRASTE-AVEC, EQUIVALENT-DE.

Nous donnons une description détaillée de ces liens dans (Otman 1990) à laquelle nous renvoyons le lecteur.

Un attribut est une propriété à laquelle peut être attachée une valeur. Par exemple, "chat" possède les attributs "poil-de-couleur" et "couleur-poil"; ce dernier peut prendre les valeurs {noir, blanc, fauve, rayures...}. Un objet générique – ou stéréotypique – ne possède pas de valeurs. Les valeurs ne sont instanciées qu'au niveau des individus. Elles n'existent donc pas dans les RST.

Nous avons posé le principe que tous les noeuds représentent des termes-concepts d'un domaine. Une recherche taxinomique de termes superordonnés conduit vers des impasses que nous appelons "primitives sémantiques" c'est-à-dire des termes indéfinissables, encore appelés noèmes (Martin 1983), qui représentent des universaux conceptuels.

Puisque nous nous plaçons dans un contexte de requêtes formulées par un utilisateur humain, ce dernier doit avoir la latitude d'exprimer des requêtes imprécises ou incertaines et même de sélectionner ses critères de recherche par niveau d'importance relative. Il faut donc concevoir un mécanisme d'interprétation à double sens :

- a) encodage d'une requête formulée en langage naturel en un RST partiel,
- b) recherche dans la base des parties de RST correspondantes par un mécanisme de "degré de recouvrement" entre RST,
- c) décodage du RST adéquat en langage naturel avec commentaires éventuels.

Ces mécanismes pourront être activés aussi bien au moment de l'interrogation de la base de données terminologique que de l'alimentation de celle-ci en données nouvelles.

5. PROBLEMES EN SUSPENS

Eu égard à la complexité de la question, nous n'avons fait qu'en survoler certains aspects et proposons de conclure par l'évocation de quelques problèmes en suspens.

Les sciences sont vivantes et leur terminologie en constante mouvance et évolution. L'imprécision, le glissement de sens, "l'instabilité proche de l'équilibre entre détermination et indétermination" (Hermans 1989) sont l'essence même d'une démarche scientifique. Une base de données terminologique n'est donc pas tant un système de notions à valeur de vérité absolue qu'un "système de croyances" où l'on considère que toutes les connaissances sont incomplètes et possèdent un degré de vérité, certes élevé, mais jamais absolu.

Les RST sont un formalisme de représentation du sens d'un terme provoquant un décalage et une réduction inévitables de l'information sémantique. Le résultat, sans être une définition du terme, est, au moins, à l'objet ce que sa schématisation graphique ou sa reproduction photographique est à sa réalité. Il répond, en tout cas, aux critères minimaux de la définition terminologique selon B. de Bessé :

Une définition terminologique est "une proposition énonçant une équivalence entre un terme, le défini, et l'ensemble des caractères qui le définissent (...). Elle n'a pas besoin d'être complète. Elle doit correspondre au savoir et aux besoins de l'utilisateur du produit terminographique. Elle doit être suffisante pour distinguer une chose d'une autre, un concept d'un autre. (de Bessé 1990 : 257)

RST et BDT sont des leviers qui doivent permettre d'avoir un meilleur accès à la connaissance, de donner une description plus précise, plus cohérente et plus systémique des objets scientifiques et techniques. Mais, quel que soit le degré de raffinement que nous pourrons y introduire, ils n'atteindront pas la connaissance totale, ni n'épuiseront le réel.

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COMMENT ALLIER LES BESOINS DU LINGUISTE ET L'UTILISATION INTELLIGENTE DE BASES DE DONNÉES ?

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Que signifie la recherche documentaire, la consultation de bases de données (BD), dans le domaine des sciences du langage ? Qu'est-ce qu'une donnée, pour le linguiste ? De quelle manière peut-on envisager l'accès à celle-ci ? En sciences du langage, une interrogation de BD peut être directement dirigée par des données linguistiques, basée sur des structures et des descriptions.¹

1. QU'EST-CE QU'UNE DONNÉE EN SCIENCES DU LANGAGE ?

Il existe plusieurs types de données en sciences du langage. Le texte brut, i.e. le corpus, constitue un de ceux-ci. A l'heure actuelle, différentes recherches se proposent de dépouiller des corpus dans le but d'observer des phénomènes indépendamment des théories linguistiques². Un autre type de donnée, la donnée lexicale, se présente essentiellement sous forme d'une entrée lexicale, regroupant un ensemble de propriétés. Enfin, "le nom spécifique de la donnée observable en linguistique est l'exemple" (Milner 1989 : 51). Ce dernier type de donnée, la forme canonique en syntaxe, retiendra plus particulièrement mon attention.

L'exemple n'est pas intéressant en tant qu'entité isolée et particulière, mais dans ce qu'il apporte du point de vue de sa généralité. A partir d'un exemple, on augmente la recherche pour former des classes d'équivalence, des paradigmes d'opposition, etc. Petit à petit, les données prennent un sens car le linguiste les décrit, les commente, les analyse.

Se donner une série de paradigmes, c'est constituer des faits à partir desquels le linguiste développe une argumentation : il procède à une organisation et il établit une classification, sur laquelle s'appuie un raisonnement empirique.

Que l'exemple et la classification définissent la donnée linguistique en syntaxe constitue le fondement de la recherche menée ici.

2. LA BASE DE DONNEES (BD)

2.1 Le contenu de la BD

Puisque l'exemple et la classification constituent l'objet sur lequel travaille le linguiste-syntacticien, le contenu d'une BD en sciences du langage doit précisément être ce même objet de travail. Pour développer une BD à visée linguistique, le chercheur lui-même déterminera ce dont il a besoin, puisqu'il est "le seul à savoir ce qu'il veut modéliser ou concevoir" (Deweze 1983 : 12).

L'idée de nourrir une BD avec des données n'est pas nouvelle. Clancey (1983), utilisait déjà, pour le développement de systèmes experts médicaux, une stratégie *data-directed*. Par ailleurs, l'interrogation de certaines bases de références

bibliographiques est possible à partir de l'objet de travail du chercheur. Dans le système DARC³, par exemple, on interroge la base *Chemical Abstracts* directement à partir de structures chimiques.

2.2 L'accès de la BD

De la même manière que les structures déterminent le type d'interrogation pour une base chimique, l'exemple peut déterminer l'accès au contenu d'une base à visée linguistique. Autrement dit, du contenu dépend l'accès, car l'information n'a pas la même forme selon le domaine abordé.

Etant donné la nature même de la donnée linguistique, il serait hors de propos que d'envisager une interrogation par mots-clefs. Ce type d'interrogation presuppose une classification figée, et s'éloigne de la *neutralité théorique* qui est présente dans l'interrogation à partir de la donnée "crue" qu'est l'exemple. Cependant, en proposant un autre type d'interrogation de BD, mon objectif n'est pas de comparer des systèmes, mais plutôt d'apporter quelques éléments de réflexion, et par là même de permettre l'accroissement des types d'outils de recherche.

Afin de comprendre de manière concrète le déroulement de ce type d'interrogation, j'envisage le scénario suivant :

- (1) Un linguiste fait une recherche portant sur le domaine de l'interrogation en français moderne, et plus particulièrement sur la structure syntaxique des formes interrogatives en *ce + être*.
A partir de l'exemple (2) ci-dessous, il consulte la base afin d'extraire une liste des noms de chercheurs concernés par cette structure, les séquences proposées, et leur optique de travail.

(2) *Est-ce Marie qui ira à Muroroa ?*

En fournissant directement des exemples, la consultation peut être véritablement dirigée par les *données*.

3. L'OPTIQUE LINGUISTIQUE : LA RECHERCHE CIBLEE

L'exemple, en tant que moyen d'accès à la consultation de base de données (CBD), se justifie d'un point de vue linguistique. Cependant, la donnée linguistique prend un sens véritable lorsqu'une analyse lui est rattachée. Ainsi, par rapport à la CBD, au lieu d'imaginer qu'il n'y ait que l'exemple "nu" en entrée, l'objet d'entrée se doit d'être une séquence provenant d'un analyseur.

"Brancher" un analyseur à l'entrée de la CBD, permet la *comparaison* des séquences ayant été précédemment analysées avec celles extraites de la base et, ce, sur un plan syntaxique.

Imaginons que le linguiste souhaite effectuer une recherche plus fine afin de cerner de plus près l'objet sur lequel il travaille : par exemple, parmi différents types d'inversion en *ce + être*, ne retenir que les séquences inversées contenant un élément interrogatif en *qui*, prédictat nominal.

(3) *Qui est-ce ?*

Au lieu d'extraire de la base toutes les séquences (4) contenant également un complément de phrase (4)(a), l'utilisateur ne désire ramasser que (4)(b) et (4)(c) :

- (4)(a) *Où est-ce que Luc est allé ?*
- (4)(b) *Qui est-ce que tu regardes ?*
- (4)(c) *Qui est-ce que c'est, qui est venu ?*

Afin de procéder à cette analyse ciblée dans la CBD, il ne suffit pas de consulter la BD à partir de la séquence analysée (3) et d'en extraire immédiatement les résultats. Il est nécessaire de relier la CBD à un analyseur afin de pouvoir effectuer une analyse syntaxique comparative.

3.1 Organisation de la base

Pour l'élaboration de cette consultation, j'ai scindé les formes interrogatives directes inversées en *ce + être* en trois types⁴ : particule ou forme causale *Est-ce que Pierre vient ?*; sans élément interrogatif *Est-ce Marie ?*; contenant un élément interrogatif *Qui est-ce ?* Toute nouvelle séquence caractérisée par une inversion en *ce + être* trouvera une de ces classes d'appartenance. Par contre, au sein de ces classes stables, on a des types de structures différents qui sont susceptibles d'être modifiés ou remplacés (types de compléments, etc). Ces derniers, de par leur mobilité potentielle, ne doivent pas intervenir dans la construction de la base.

Ainsi, si je consulte la base à partir de la séquence *qui est-ce ?*, je pourrai connaître immédiatement son appartenance à la typification linguistique générale *contenant un élément interrogatif*. Cependant, afin de différencier cette séquence (*contenant un prédicat nominal*) de *où est-ce ?* (*contenant un complément de phrase*) ou d'autres séquences appartenant aux autres types, je dois effectuer une comparaison *ciblée* en passant par l'analyseur.

La BD est de facto structuralement pauvre, étant uniquement scindée en trois divisions générales. Cette pauvreté se justifie : il appartient à l'analyseur seul de fournir l'analyse syntaxique complète de la structure interrogative.

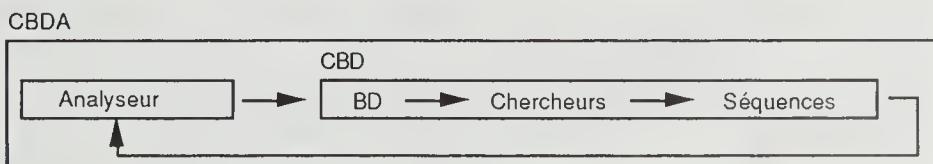
3.2 L'analyseur et la comparaison de structures

La séquence analysée telle qu'elle apparaît en sortant d'ASIF (cf. Panckhurst 1990) est illustrée, sous sa forme FX⁵, en (5) :

(5) *Est-ce Marie ?*
 (type_structre
 ("PHRASE INTERROGATIVE"
 "—————"
 "avec inversion en ce + être"
 "structure simple non clivée")
 (interro_ce_scl
 0
 (rvfl () ("est" "vauxflé" "vpflé" "sg" "p3" "être"))
 (inco 0 ("-"))
 (ce 0 ("ce" "décitique" "adem"))
 (sn 0 ("marie" "np" "f" "hum"))
 ("?" "ponc")))

L'utilisateur peut ensuite décider de fournir l'exemple (5) à la BD. En procédant à l'étape comparative, les séquences extraites de la BD sont analysées une à une par ASIF. Après comparaison individuelle de chaque séquence de la BD avec la séquence d'origine⁶, seules sont retenues les séquences congruentes.

De cette manière est créé un processus de recherche d'information englobant une analyse syntaxique et la consultation de BD (CBDA), ainsi qu'ilustré dans la figure suivante :



4. CONCLUSION

Une BD linguistique est destinée à être interrogée par des utilisateurs ayant des approches différentes. Les linguistes doivent trouver une manière commune de procéder à une interrogation intelligente, sans nier pour autant les différences de tout un chacun. L'objectif du système CBDA est de fournir un point de rencontre

entre différentes descriptions linguistiques. Cet objectif pourrait être rapproché de celui du *Text Encoding Initiative* (TEI)⁷.

A l'avenir, on peut espérer que se réalisent d'autres outils, permettant de réduire les barrières intra et interdisciplinaires, d'accéder à une synthèse plus grande des phénomènes étudiés, et de passer "de la documentation intelligente [...] à la conception assistée par ordinateur" (Deweze 1983 : 12).

NOTES

- 1 Je remercie Jean-Marie Marandin, Sophie David et Claude Ricciardi Rigault pour leurs remarques perspicaces.
- 2 Un projet européen comme NEC (Network of European Corpora) par exemple, a pour objectif de créer des corpus de langues polythéoriques.
- 3 Le système DARC, conçu à l'UFR de Chimie à l'Université Paris VII, permet une manipulation des données conforme au langage des spécialistes.
- 4 Cf. Panckhurst (1990) pour une explication détaillée du vocabulaire spécifique employé ici.
- 5 FX (programmation en faisceaux), écrit en Common Lisp, a été développé par Pierre Plante du RDLC, Centre d'ATO, UQAM. Cf. Plante (1992).
- 6 Plusieurs degrés de comparaison sont possibles : une vérification globale au niveau de la caractérisation de l'inversion ; une vérification globale et une vérification par rapport aux constituants internes ; une vérification globale, une vérification interne et une vérification du nom de l'élément interrogatif.
- 7 TEI est un projet international ayant comme objectif de fournir un format d'échange des lignes directrices pour l'encodage de textes électroniques. Ce format est basé sur le Standard Generalized Markup Language (SGML).

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ANALYSE ET TRAITEMENT DES ACTIONS NOMINALISÉES

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1. INTRODUCTION (1)

Représentations linguistiques d'une catégorie d'événements du monde de référence, les procès se retrouvent dans le texte sous forme verbale ou sous forme nominale. Dans ce dernier cas, nous parlons d'actions nominalisées (désormais AN) même si le terme "nominalisation" est plus répandu(2). L'AN recouvre toutes les formes de catégorie nominale ayant, le plus souvent mais non obligatoirement, une base verbale correspondante dans le lexique(3), et renvoyant à une action dans le monde de référence(4). Disposer d'un instrument de repérage automatique des AN permettrait de repérer plus rapidement(5), dans les textes scientifiques et techniques, dans les entrevues d'experts, etc., les différentes catégories sémantiques nécessaires au classement puis au calcul des informations, pour le développement de systèmes à base de connaissances. Notre équipe (voir David 1990) a mis au point un outil de traitement automatique des unités uni- ou polylexicales (TERMINO). Il permet de repérer des formes aussi complexes que : "infection profonde du stroma à c-albicans", mais dans les listes d'unités nominales produites, actuellement, rien ne distingue les substantifs (représentant des objets) des prédictifs (ou AN)(6). Or le français, en particulier scientifique et technique, fait grand usage des actions exprimées sous forme de noms. Il s'est donc avéré nécessaire de pouvoir identifier en contexte les marques spécifiques des noms à valeur prédictive et de les analyser.

Le corpus choisi comme appareil se compose de 400 textes médicaux et pharmacologiques portant sur les mycotoxines. Nous cherchons à diagnostiquer de façon systématique ce à quoi les nominaux qu'on y trouve renvoient (par exemple et selon notre classification : objet, état, état résultant, fait, événement de type cinématique, action(7)). Nous avons répertorié les particularités(8) concernant les AN, étudié les caractéristiques de type aspectuel associées aux formes lexicales en contexte. Puis, nous avons développé des règles et des algorithmes basés sur des critères morpho-syntaxico-sémantiques et permettant d'abord de repérer des candidats à l'action nominalisée, puis de les agréer ou non à ce titre(9). Le langage utilisé pour la programmation aux niveaux syntaxique et sémantique (FX(10)) permet un calcul de "saillance" utilisé pour résoudre les problèmes de classification et de diagnostic.

2. METHODE

2.1 Problèmes de reconnaissance

Quelquefois la morphologie oriente fortement l'interprétation d'un lexème (ex. "soigneur", "arrosoir", etc. (11)). Les suffixes nominalisateurs semblent alors

fonctionner comme des catégoriseurs, des éléments qui font changer la catégorie syntaxique des termes de base, tout en maintenant leur signification(12). Cependant, en ce qui concerne les candidats morphologiques à l'AN, l'étude de la suffixation ne renseigne pas suffisamment. Même les suffixes nominalisateurs apposés à une base verbale et particulièrement productifs, comme : "-age, -tion, -ment, -ure"(13), ne peuvent être reconnus comme des marqueurs permettant seuls d'accréditer ou de discréder une candidature à l'action nominalisée.

Afin d'illustrer les problèmes posés par le diagnostic d'un candidat à l'action nominalisée (CAN), voici un échantillon représentatif tiré de notre corpus :

- Candidats indiquant une action :

"Le **diagnostic** rapide d'*aspergillose*(14) cutanée a été fait par l'**examen** direct du toit des vésicules". "Trente deux malades..., avec cathéters de Broviac... De l'amphotéricine B peut être perfusée... L'**ablation** du cathéter n'est pas nécessaire(15)". "Une malade a été traitée avec succès par l'**association** de médicaments(16)". "Méthode puissante pour déceler les **couplages** homonucléaires dans les molécules... (17)".

- Candidats indiquant un fait :

"C'est un médicament très utile, mais...l'**administration** orale est inefficace". "Dans l'hypertension..., le **cotransport** du na+k vers l'extérieur est perturbé". "L'**exposition** d'*aspergillus fumigatus* ... au kétoconazole augmente la dose d'activité fungicide minimale de l'amphotéricine B..."(18)

- Candidats indiquant un état résultant :

"L'**infection** provient principalement de chats". "...a relevé une **inflammation** granulamenteuse provoquée par cladosporium". "Les **Résultats** indiquent...". "Une **culture** positive d'*histoplasmacapsulatum* a été obtenue...".

- Candidat indiquant un objet :

"L'**articulation** présente une bonne activité fonctionnelle...". "...X est le **produit** le plus efficace..." Exemples forgés : Le **diagnostic** est arrivé chez le médecin. Une malade a été traitée par l'**association** des médecins de nuit.

Autour de quels critères s'articule l'interprétation d'un candidat? Quelles sont les marques syntaxiques qui peuvent être déterminantes de ce point de vue?

2.2 Analyse et traitement

2.2.1. Niveau morphologique : NOMINA

Nomina vise à repérer, à l'aide d'indices morphologiques, les unités lexicales nominales candidates à traduire une action. Les deux principaux problèmes qui se sont posés en début d'analyse étaient :

1. la quantité de lexèmes candidats (tous les noms attestés, environ 30 000);
2. la prolifération des néologismes.

La consignation des candidats attestés ou en voie de lexicalisation dans un dictionnaire nous est apparue comme une démarche peu adéquate à notre objet, dans la mesure où nous considérons le lexique attesté comme un sous-ensemble ponctuel du lexique possible. Si le lexique ne peut être circonscrit, les règles de dérivation sont par contre assez stables. C'est sur cette base que repose l'algorithme. À partir du lexique d'usage, nous avons dégagé un ensemble, le plus exhaustif possible, de modèles de dérivation propres à engendrer une action nominalisée et qui, une fois transformés en procédure informatique, nous permettent de traiter aussi bien les candidats attestés que de découvrir les candidats néologiques à l'action nominalisée. Ces modèles ont d'abord été projetés sur un dictionnaire des formes attestées par les principaux dictionnaires généraux de la langue française. Le résultat de cette analyse nous a conduit à l'élaboration d'anti-dictionnaires où ont été consignées certaines irrégularités formelles. Dans la perspective d'une économie de temps nécessaire au traitement

des néologismes, nous nous sommes intéressés, dans un deuxième temps, à hiérarchiser la rentabilité de chacun des modèles en vue de projeter prioritairement les modèles les plus prédictibles sur toute nouvelle forme lexicale à analyser. Les termes repérés constituent des CAN. Tous les candidats repérés par NOMINA sont ensuite analysés par STAN qui comporte un système de contraintes syntaxico-sémantiques permettant d'accréditer ou de discréditer une candidature à l'action nominalisée.

2.2.2. Niveau syntaxico-sémantique : STAN

L'interprétation d'un candidat morphologique à l'action nominalisée requiert la prise en compte de critères d'ordre syntaxique et sémantique. Ces critères sont non seulement de nature différente, mais encore ils apparaissent dans un ordre imprévisible, ils sont incomplets, ils présentent un caractère d'incertitude. Ils peuvent être externes ou internes au CAN. Dans le cas des nominaux déverbaux, il peut s'agir du caractère transitionnel ou non-transitionnel (Vickner 1986), perfectif ou imperfectif (Pottier 1987), ou encore catégoriel, des verbes qui constituent la base des candidats. Mais, indépendamment de toute origine morphologique, les indications les plus intéressantes proviennent du contexte : prépositions introducives ou consécutives au CAN, déterminants (présence-absence, type), verbes introductifs ou consécutifs au CAN (verbes d'aspect, déontiques, attributifs, factitifs, verbes de causalité événementielle (Von Wright 1971; causalité directe ou inversée), apposition du CAN à un autre terme (CAN ou non), situation du CAN dans une unité nominale polylexicale (ou synapsie), etc.

Certains de ces critères peuvent donner lieu à l'établissement de règles simples. Certains autres ne font que participer à l'interprétation de la catégorie du candidat, effectuée grâce au "calcul de saillance" que permet le langage FX.

3. CONCLUSION

Après avoir présenté les problèmes que pose la reconnaissance automatique des actions nominalisées, nous avons proposé des moyens d'y parvenir. La démarche consiste, dans un premier temps, à repérer les candidats à partir d'indices morphologiques, puis à confirmer ces candidatures, à partir de marques repérées aux niveaux syntaxique et sémantique. En ce qui concerne le développement informatique, NOMINA est actuellement en phase d'expérimentation et nous possédons pour STAN une première maquette.

Spécifions pour conclure, que notre analyse restera nécessairement et dans plusieurs cas sous-déterminée et qu'elle ouvre, par conséquent, des voies à explorer dans le cadre d'une description plus vaste, d'une part, de la structure argumentale des noms d'action et, d'autre part, de la structure narrative des textes.

4. NOTES

(1) Je remercie de leur participation à ce projet J. Caron et L. Dumas, de l'équipe Recherche et développement (RDLC) du Centre ATO-CI de l'UQAM.

(2) Une acceptation courante de "nominalisation" renvoie à la transformation d'un verbe, d'un adjectif, d'un syntagme non-nominal ou d'une phrase, en un syntagme nominal.

(3) Les CAN à base verbale lexicalisée (archétypes verbo-affixaux) sont les plus nombreux mais d'autres noms indiquent aussi une action : néologismes ("fax/faxage"), mots construits sur une base adjetivale ("éruptif/éruption") ou nominale ("facteur/factage"), formés à partir d'éléments de composition (par ex. "thérapie"), correspondant étymologiquement à un verbe ("cure", du latin "curare"), enfin noms n'ayant aucune relation avec aucun autre terme ("biopsie").

Nous considérons comme un phénomène particulier (*unités verbales polylexicales (UVPL)*) les relations établies entre des verbes dits supports et les nominaux qui les accompagnent. Malgré leur importance numérique, les AN ne sont pas seules concernées par ce phénomène. On y retrouve, en particulier, un autre type de forme nominale que nous appellerons des *pseudo-objets*.

- Ceux-ci regroupent un amalgame de phénomènes dont certains classés par d'aucuns dans les nominalisations et dont le caractère principal est d'être des nominaux considérés non dans leur dimension substantivale mais dans leur dimension fonctionnelle ou prédicative. Parmi ces objets, on retrouvera des états mentaux ("peur"), des phénomènes météorologiques ("le vent"), mais aussi tous les taxons qui ne se définissent que par leur fonction comme les "mammifères", les "antibiotiques", soit "des objets qui font quelque chose". Ces formes représentent des potentialités ou des virtualités d'actions. Néanmoins, il s'agit là d'une autre classe de phénomènes que les AN.
- (4) On peut rapidement définir l'action comme étant, pour un sujet ou pour un objet, le passage d'un état à un autre, via un processus. L'"action" s'inscrit dans le temps et dans l'espace (Grimshaw 1989), contrairement au "fait", au sens où l'entend Vendler (1968) et que nous reprenons. C'est ce qui caractérise la différence entre ces deux modalités d'"événements".
- (5) Le "temps-personne" consacré au codage manuel constitue un goulot d'étranglement.
- (6) Cela est d'autant plus évident que TERMINO ne fait pas appel à la sémantique.
- (7) On parlera alors de "procès" ou représentation textuelle d'une "action" dans laquelle le passage d'une situation à une autre est régie par un agent. Ce dernier point permet de distinguer l'action d'un événement cinématique tel que "grandir", comme dans : "Jean grandit" (J.-P. Desclés 1990).
- (8) Nous cherchons à éviter tout pré-listage. L'analyse est actuellement conduite au seul niveau linguistique. Notre hypothèse est que l'on doit pouvoir faire l'économie du pragmatique (comme connaissance et représentation du micro-univers de référence) pour la reconnaissance des AN.
- (9) Même après traitement, le diagnostic sur l'identité des unités lexicales reste éminemment indicatif, l'objectif étant de fournir un pointage des termes qui puisse accélérer le traitement.
- (10) Langage développé par P. Plante, RDLC, Centre ATO-CI, UQAM.
- (11) D. Corbin (1988) écrit : "Un mot construit est un mot dont le sens prédictible est entièrement compositionnel par rapport à la structure interne, et qui relève de l'application à une catégorie lexicale majeure (base) d'une opération dérivationnelle (...) associant des opérations catégorielles, sémantico-syntaxique et morphologique".
- (12) Certains préfixes aident aussi à déterminer des valeurs aspectuelles.
- (13) Plus de 7 000 noms sont associés aux suffixes -age, -ment, -tion, -ure.
- (14) Nous ne pouvons discuter ici du vocabulaire local où le suffixe "-ose" (en dehors de la famille des oses (ex. glucose) s'oppose à "-ite", pour le caractère inflammatoire ou non des affections. Ces dernières sont définies par Garnier-Delamare (1989, après H. Roger) comme "un processus morbide envisagé dans ses manifestations actuelles" (nous rapprochons le "processus" de l'événement cinématique, dans nos catégories d'"événements").
- (15) Cet exemple reste ambigu entre "fait" et "action" hors contexte. Ainsi, si l'on ne conserve que : "l'**ablation** du cathéter n'est pas nécessaire", le CAN doit être considéré comme un fait.
- (16) Un test de remplacement de l'action nominalisée par "en associant" permet de vérifier que c'est moins le résultat que l'action qui est envisagée ici.
- (17) "Couplage" indique le plus souvent le fait de coupler mais peut aussi (dictionnaire Robert) marquer le résultat; le contexte ne permet pas de lever totalement l'ambiguïté.
- (18) L'interprétation reste ambiguë en raison du genre 'résumé de textes scientifiques'.

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LA MODALISATION EN FRANCAIS PARLE: UNE ANALYSE INFORMATISEE.

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1. INTRODUCTION

Notre travail sur les modalités en contexte oral dialogique fait appel à une conjugaison d'approches (philosophique, linguistique, pragmatique, énonciative, psychologique) pour le traitement le plus large possible de la modalisation définie comme opération de prise en charge par l'énonciateur du contenu propositionnel de son énoncé en regard d'un événement ou d'une certaine relation intersubjective distinguant ainsi le dictum ou contenu de pensée du modus ou attitude que prend le sujet vis-à-vis ce contenu (Bally, 1944; Cervoni, 1983; Culoli, 1978; Saint-Pierre, 1991; Vignaux, 1988).

Sur le plan linguistique, nous voulons décrire l'expression linguistique de la modalité c-à-d les modalisateurs, qui indiquent que l'énoncé est assumé ou non par le locuteur et sur le plan pragmatique, mettre en rapport modalisation et force illocutoire (Saint-Pierre, 1991). En outre, dans une perspective génétique du langage, nous voulons savoir comment l'enfant traite les modalités car les modalités ont le double avantage de posséder une réalité psychologique incontestable et d'être dotées d'un statut linguistique, ce qui permet de rendre compte d'un grand nombre de processus cognitifs. (Piéraut-Le Bonniec, 1974).

La catégorisation des éléments linguistiques, prosodiques, discursifs et métadiscursifs de modalisation fait l'objet d'une analyse computationnelle (Plante, 1992) qui permettra de modéliser les connaissances impliquées dans la modalisation chez les locuteurs du français et offrira une réponse au paradoxe exprimé par Dubois (Dubois et alii 1973:320) auquel est confronté la linguistique de l'énonciation c-à-d. de devoir décrire avec des éléments linguistiques discrets un phénomène réalisé sous forme de continuum comme celui de la modalisation.

2. METHODE

2.1 Une démarche onomasiologique

Dans le cas des modalités, en l'absence de caractéristiques formelles parfaitement distinctives sur le plan linguistique, il est justifié d'adopter une démarche onomasiologique pour décrire la modalisation puisqu'il s'agit de décrire l'"adhésion" du locuteur à son discours à partir de la notion de modalité développée chez les logiciens (Cervoni, 1983:74; Saint-Pierre, 1991). Il s'agit donc de repérer l'ensemble des moyens discursifs dont dispose le locuteur pour exprimer les modalités: aléthique exprimant la nécessité et la possibilité de la vérité propositionnelle; épistémique ou le domaine du savoir (certitude et possibilité); le déontique celui du *devoir* (obligation et permission) et enfin le domaine de l'évaluation, l'*appréciatif*.(mélioratif et péjoratif). Donc, double transposition: du domaine logique au domaine linguistique et du linguistique au discursif en tenant compte du prosodique et du métadiscursif en contexte conversationnel.

Deux types d'indices pour chaque domaine de modalisation ont été distingués: 1°) les formes "canoniques" qui ont une signification seulement ou essentiellement modale: (auxiliaires, adverbes, adjectifs et noms modaux) qui constituent le "noyau dur" de la modalité; 2° les éléments du discours qui jouent un rôle équivalent sur le plan de la modalisation. En termes d'intensité, les modalisateurs prennent la valeur d'"atténuateur" ou d'"intensifieur"

Il s'agit donc de décrire empiriquement les moyens linguistiques, prosodiques, discursifs et métadiscursifs que le locuteur utilise pour exprimer ces valeurs en contexte conversationnel et comme le montrent nos travaux sur la modalisation, (Saint-Pierre 1991):

"Dans le discours, une répétition insistante, une intonation particulière, un effet de voix, un geste accompagnateur peuvent avoir pour conséquence de changer en évaluatifs des termes qui, a priori n'en sont pas." (Cervoni 1983:77).

Pour rendre compte de la façon dont ces représentations sont construites et pour comprendre les opérations de modalisation et leur rapport avec les forces illocutoires des énoncés, il faut ""modéliser" à un niveau "abstrait" et donc "métalinguistique" la façon dont le système du langage est à même de contenir et d'agencer des "opérations" qui vont fonder ces phénomènes de représentation" (Vignaux 1988:135). C'est pourquoi nous traiterons les énoncés analysés à l'aide d'un système d'aide à la représentation qui a pour but de modéliser les connaissances impliquées dans la production des énoncés considérés sous un double point de vue: celui de l'illocutoire et de la modalité.

2.2 L'analyse Informatisée

Nous avons développé au Centre ATO.CI (Centre de recherche en Cognition et Information) de l'UQAM une grammaire assistée de la modalisation. Celle-ci a été transposée et programmée en langage FX (grâce à la collaboration de Lucie Dumas du Centre ATO.CI).

FX (v5, Plante 1992) permet de construire une base de connaissances sur l'ensemble des énoncés. La description porte d'une part sur la caractérisation des actes illocutoires et des marqueurs de modalisation utilisés dans chaque énoncé et d'autre part sur les liens contextuels tissés entre ceux-ci. La nature du lien entre deux énoncés peut être par exemple: l'itération, la justification ,l'explicitation, l'accord ou le désaccord, etc.

Les primitifs de la base construite sont donc des entités à multiples facettes correspondant à la fois aux éléments de catégorisation interne (actes illocutoires et marqueurs de modalisation) et externe (liens contextuels) des énoncés. Les éléments de cette base seront systématiquement comparés les uns aux autres à l'aide d'une technique FX nommée calcul de saillance.

Le calcul de saillance mesure la proximité multi-facettes de deux objets d'une base de connaissance. Il s'agit d'une forme de calcul de similitude qui tient compte de la rareté partagée d'une facette (deux objets se ressemblent davantage s'ils sont les seuls à partager une facette) et de l'expressivité des objets (un objet qui a plusieurs facettes n'est pas privilégié par rapport à un objet moins expressif).

L'étude de saillance construira des réseaux sur les objets de la base d'énoncés. Ces réseaux montreront des zones de regroupement où pourront émerger des catégories non nécessairement prévues dans notre grammaire descriptive et qui pourront être considérées comme des propriétés globales nouvelles de celle-ci.

3. APPLICATIONS

Dans le cadre d'une recherche sur le développement du langage, ce système est appliqué à un corpus informatisé de conversations entre enfants de 5 à 10 ans (environ 7,500 énoncés). Ce système permettra d'étudier la modalisation comme un indice du développement linguistique relié au développement socio-cognitif, lui-même marqué par d'importants changements à cet âge. (Piéraut Le Bonniec, 1974). L'analyse computationnelle nous renseignera sur la façon dont les enfants construisent les catégories modales (comment ils traitent le réel, le possible, la certitude, l'appréciatif) et sur les processus cognitifs impliqués dans le raisonnement modal chez l'enfant.

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INTELLIGENT CHARACTER RECOGNITION: LINGUISTIC RULES CAN RAISE ITS IQ

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1. INTRODUCTION

Why would anyone want to utilize optical character recognition technology? The answer is to save time or money, or both. Turning a printed document into a useful, if not perfect, machine readable file is what optical character recognition (OCR) is about.

If OCR's output takes longer to correct than entering data manually and proofing, then OCR does not save time, and most probably does not save money.

OCR has been around for more than 20 years. Early OCR devices were used to produce files for mainframe computers and required that input documents be printed in a special OCR font.

One could use an IBM Selectric typewriter fitted with an OCR type element to produce documents for OCR input. The advantages of that approach were that IBM typewriters were numerous at a time when keypunch machines were scarce and expensive, and there were many more typists available than keypunch operators. Although early OCR required manual data entry, the results were excellent.

Shortly after the debut of the IBM personal computer came the promise of optical scanners for those machines (and compatibles) capable of reading one or more fonts directly from printed material.

After several more years a major U.S. firm announced a line of OCR scanners for use with personal computers. The firm claimed its scanning system could read "virtually any real-world document quickly and accurately," utilizing intelligence which enabled it to scan "thousands of typestyles and sizes," including "photocopied, blurred or broken characters, ligatures and special symbols." Further, the system was claimed to be able to process English, French, German, Italian, Spanish, and Swedish.

The OCR scanning system consists of software, a scanning device resembling a desktop copying machine,

and an adapter board with its own processor and memory for an expansion slot in an IBM AT or compatible.

2. THE PC LABS' TEST OF 12 OCR SCANNERS

PC Magazine (March 28, 1989) gave its highest ratings to this system in its PC Labs report on 12 optical character recognition scanners. The report stated that both the top end and low end models (priced then at approximately \$16,000 and \$5,000 U.S.) were the only ones tested with character reading hit rates above 98 percent while scanning proportionally spaced Times Roman and Helvetica fonts in four sizes ranging from 8 to 14 points. (PC Labs tested the OCR scanners with other fonts but did not report results.)

Reporting on the top-rated bottom of the line model, PC Magazine stated that with its ICR (intelligent character recognition) technology when the "scanner encounters difficult text, it doesn't pause to whine about it, or--worse--throw in error characters recklessly, as many scanners do" but what it "can't read, it ignores, and then it goes on with its business. Retaining the unreadable text in memory, it makes periodic trips back to the previously illegible characters and attempts to replace them with the most logical substitutes based on an assessment of the text as a whole."

The PC Labs report was the deciding factor in the writer's recommendation that his academic department purchase the system's the model just below the top of the line.

3. TOP RATED OCR SCANNER TESTED WITH SPANISH TEXT

While waiting for delivery of the unit (which took several months), the local vendor's salesperson offered to satisfy the writer's anticipatory curiosity by processing a sample of Spanish text on a system in the vendor's computer training room.

The sample was intended by the writer to consist of 10 consecutive pages chosen at random from a modern edition of the Spanish literary masterpiece, Don Quijote, by Miguel de Cervantes. The salesperson made five photocopies, each of two facing pages from the book, he set scanner parameters, and scanned the sample of text, producing an ASCII file.

It turned out that only the five even-numbered pages were scanned, either the intention of the salesperson or his error in setting the parameter for two columns.

Each page began with an Arabic page number on the same line with a header in proportionally spaced italic capital letters. The main text consisted of eight lines per vertical inch in a proportionally spaced font appearing to be eight point size.

The scanner's output was disappointing because a great many items without reading error flags were

unrecognizable as Spanish words. This indicated the OCR system did not know what Spanish words looked like.

The writer concluded that the system was completely devoid of linguistic intelligence, at least when processing text in the Spanish language.

Since these results were so unpromising, a planned project which would be based on hundreds of pages of text in Spanish was postponed.

4. ADDING LINGUISTIC INTELLIGENCE

The writer's lingering thought about the OCR system's dismal failure in reading Spanish text made him wonder whether linguistic intelligence could supplement intelligent character recognition.

The writer devised a set of experimental linguistic rules based primarily on graphemic representation of Spanish phonotactics. These rules established criteria for "wordhood" in the Spanish language, and they were coded to produce a computer program to postprocess the scanner's slightly edited output.

The scanner's line records had terminated with several initial characters of lines on the odd numbered facing pages because of a miscalculated column width setting; these characters were deleted. Also deleted was the OCR system's message **NEW**.

The unit the postprocessing program deals with in the scanner's output is a contiguous group of characters bounded on the right by white space, punctuation followed by white space, punctuation ending a record, or the end of record. This unit, in ordinary text a word, is referred to here as an "item." An item may be a word or a non-word.

An item may display the characteristics of a word but it is not necessarily a word. Even though an item may be a word, it may not be the actual word the scanner attempted to read.

The postprocessing program isolates items in the scanner's output, discovers non-words and gives reasons for that status, lists those items which pass tests for wordhood, and produces certain statistics. The program does this without any specific knowledge of the scanner's input text or output file.

The program produces two output files. One file first lists each non-word along with reasons why it cannot be a word in Spanish, and it ends with a statistical summary showing the number of items processed, the number of non-words the result of unflagged scanning errors, the number of reasons cited for non-wordhood. the totals for each reason for non-wordhood, and the total number of items judged to pass the wordhood tests.

5. RESULTS OF LINGUISTIC POSTPROCESSING

The postprocessing program isolated 2,800 items

for consideration for wordhood status. Of these items, 2,303 were judged to pass the wordhood tests, leaving 497 items identified as non-words for one or more reasons. Reasons for non-wordhood were cited 916 times.

These results indicate that 18% of the items derived from the input file were not and could not be words in Spanish.

The 497 non-words included 11 flagged by the OCR system. Those 11 items were not judged non-words because they contained error flags, since error flags were considered wildcards standing for any vowel or consonant.

The OCR system was aware of one or more reading errors in only 2% of the 497 non-words.

Among those items which passed the wordhood tests but which are not words are: CIRVA, lahase, ectorbaran, muclio, and traidol. These items passed tests because they display consonant and vowel patterns found in legitimate words. One could explain them as potential word forms waiting for a meaning.

Of the 39 error flags in the scanner's output, 19 appeared in items passing wordhood tests.

Among the items flagged by the OCR system which were allowed to pass wordhood tests were: n, l, l~, ~~~, and continuo~.

The program granted wordhood status to these items because substitutions for the error flags, the tilde, could produce words. One could replace the tilde in n to produce the words un or en, for example, in l to produce the words al or el, in l~ to produce the words lo, le, or la, in ~~~ to produce any three letter word, and in continuo~ to produce the word continuos.

The printed text contained two Roman chapter numbers and five Arabic page numbers. The program originally recognized "number words," but those sections of the program were disabled because there were many more instances of false Roman and Arabic numbers than legitimate ones. A choice had to be made whether to account for "number words" or not. Programming logic alone cannot distinguish between Roman numeral vi and the Spanish verb form vi, or determine whether Arabic numerals are numbers or a misread word. The number of non-words and reasons for non-wordhood were the same whether or not Arabic and Roman "number words" were accounted for, since there were errors in scanning the "number words."

6. CONCLUSION

Was this test with Spanish text simply an inadvertent and happenstance worst case event? Perhaps so, but the initial poor results led to this opportunity to demonstrate that linguistic intelligence can raise the IQ of intelligent character recognition.

SECTION 14

PIDGINS ET CRÉOLES

PIDGINS AND CREEOLLES

HYBRIDATION CRÉOLE DANS LE LEXIQUE ICHTYONYMIQUE DE LA RÉP. DOMINICAINE

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1. La péninsule de Samaná, à l'est de la R. D., se caractérise par la présence de trois communautés linguistiques différentes consolidées depuis le début du XIXème siècle. Les langues en contact sont l'espagnol, un créole de base française (dit "patois") et une variété locale d'anglais originaire des îles environnantes et surtout du sud des États-Unis. Aujourd'hui, l'espagnol est devenu la langue dominante, mais l'anglais conserve un prestige incontestable alors que le "patois" montre une certaine vitalité de plus en plus réduite à la sphère domestique. Cette situation de contact linguistique a occasionné, "la existencia de una amplia franja o frontera dialectal caracterizada por un hibridismo léxico-semántico..." (Benavides 1973: 18).

Nos enquêtes sur les noms vernaculaires des poissons, dans le cadre du projet LIRD(1), confirment cet état de fait. Nous amorçons ici une analyse des interférences linguistiques observées à différents niveaux chez des pêcheurs bilingues et trilingues de deux localités: Villa Clara, située dans la "zone du patois" (González y Benavides 1982: 125) et Aguas Sabrosas, située dans une zone d'influence plus typiquement anglaise.

Pour ces fins nous avons adopté la démarche méthodologique suivante:

- 1) **Transcription**, selon le système de notation de l'API, de tous les ichtyonymes provenant de chacune des trois langues ainsi que des cas de mots hybrides ou imbriqués.
- 2) **Identification** des équivalents dans la littérature et/ou **normalisation** des termes soit en créole haïtien, en respectant les normes orthographiques officielles établies par l'Institut Pédagogique National (Valdman 1981), soit en anglais moderne. Pour cette identification nous avons eu recours, dans le cas des mots créoles français à deux types de sources:

- sources écrites: dictionnaires généraux du créole et listes ichtyonymiques spécialisées (Pressoir 1941; Midrouillet 1980; FAO 1961; Wylie 1987).
- sources orales: enquêtes pratiquées auprès de pêcheurs créolophones, immigrants originaires de Jacmel et habitant à Batey del Soco, sur la côte sud-est de la R.D.

Pour les mots d'origine anglaise nous nous sommes bornés à des sources écrites.

3) Translittération, en respectant les normes citées.

C'est ainsi que nous avons établi une liste copieuse d'ichtyonymes créoles ou créolisés qui contraste avec une autre fort réduite dans le dialecte local anglais (2). Nous nous sommes attardés aux cas d'interférence où les trois langues se trouvent imbriquées à différents degrés et niveaux (sémantique, morphologique, phonétique). Nous proposons ici d'abord une première classification de ces lexies.

1. Influence de l'espagnol sur le créole

- .1 influence phonétique: *balbareñ**, *safal**, *djo pîna*.
- .2 emprunt: *kandil*.
- .3 hybridation
 - .1 lexème espagnol avec morphème créole: *palomèt*, *hourelèt*, *sapate*, *gat*, *tchoutch*, *balbe*.
 - .2 mot espagnol + mot créole: *ti hourel* (<*jurel*), *sama wouj*.
- .4 calque:
 - .1 absolu: *papiyon*, *tambouren*, *longanis**, *pwason bondye*, *pwason solèy*, *bouch long*, *pwason plim*, *pwason wa*;
 - .2 partiel: *kong labou*, *kwokwo bourik*, *pwason kðwðsðl*, *pwason mato*, *pwason savon*, *pwason zegui*, *bekin franse*, *aganma(n)*, *lanmè*, *karang nwè*, *têt mato*, *pwason wouj*.
- .5 calque avec adaptation morphophonologique: *kònèt*.
- .6 calque-hybridation *kanson tchin*, *sabelet pintad*, *medegral jòn*, *palgo blan*, *sama labou*.

2. Influence de l'espagnol sur l'anglais

- .1 hybridation: *quesera fish*, *white croco(?)*
- .2 calque absolu: *godfish*, *half of a fish*, *barred fish*, *kingfish*, *longmouth*, *dogfish*, *guardfish*, *redfish*, *twenty-four hours*.
- .3 calque-hybridation: *gwynappa fish*.

3. Influence du créole sur l'espagnol

- .1 influence phonétique: *peje siera*, *pejerey* ([*ɛ*] au lieu de [*r*])

4. Influence du créole sur l'anglais

- emprunt avec adaptation phonétique: *becassine*

balbareñ*: Le mot créole *babaren* semble avoir subi l'influence de l'espagnol dominicain **balba non seulement à Samaná mais aussi dans d'autres régions d'Haïti où la forme *balbareñ* est également attestée.

**safal*: *Safal* serait une variante de *saval*, lexie répandue en Haïti et aux Antilles françaises. Il s'agirait ici d'un emprunt ancien du créole français à l'espagnol *sábalo*.

**longanis*: Le mot créole *longanis* ('saucisse') est déjà un emprunt à l'espagnol *longaniza*.

Comme on a pu l'apprécier, nous avons repéré divers cas d'hybridation soit dans des lexies simples où un lexème espagnol a été adopté avec un morphème du créole (*palomèt*, *hourelèt*, *balbe*), soit dans des lexies composées dont les parties appartiennent à des langues différentes (*ti hourel*, *sama rouj*).

Les calques absolus, où la lexie entière résulte d'un calque, ne font pas défaut non plus (*papiyon*, *tanbouren*, *pwason bondye*, *bouch long*, *pwason wa*) bien qu'il existe aussi des calques partiels, où seulement une partie de la lexie résulte d'un calque (*kong labou*; *kwo kwo Bourik*), et des cas mixtes, où hybridation et calque se conjuguent (*sabelet pentad*).

Voici trois cas douteux, au niveau étymologique, exclus de la classification précédente: *balawou*, *bous* et *koulirou*.

Balawou: Ce mot apparaît dans les trois langues (*balajú*, *balarou*, *belawou*, *balao*, *ballyhoo*, *ballaw*) et semble courant depuis la Floride jusqu'aux Antilles Néerlandaises. D'après Breton (1665), Mathews (1951), et Burchfield (1972), il s'agirait d'un mot d'origine caraïbe, ce qui justifierait son étendue dans l'ensemble des Antilles. Une autre étymologie possible serait un mot basque (*balahú*, 'goélette') via l'espagnol (Martín Alonso 1958: 619).

Bous: Malgré l'apparence d'un vieil emprunt, les indices ne révèlent pas de façon certaine quelles seraient les langues emprunteuse et prestataire. En faveur d'une forme originelle créole *bous* (bourse), signalons son étendue géographique (Haïti, Antilles françaises) par opposition à **buzo**, attesté seulement en R. D. Par contre, l'espagnol **buzo** présenterait une motivation plus convaincante ('plongeur') que la forme créole ou française, apparemment immotivée.

Koulirou: Mot attesté en Haïti et dans les Antilles françaises sous les formes *kouliwou*, *kiliu*, *coulirou*. Son origine, cependant, n'a pas été consignée. Étant un poisson à la queue jaune, s'agirait-il d'un emprunt ancien à l'espagnol dominicain *colirubia*? La forme *Kouliroub* de Samaná, avec son [b] final conservé, appuyerait cette hypothèse.

Conclusion

À la lumière de ces cas d'interférence linguistique, nous croyons pouvoir affirmer que la prédominance progressive de l'espagnol dans la zone de Samaná est évidente. En effet, nous constatons que c'est l'espagnol qui contamine aussi bien le créole français que l'anglais d'une façon prépondérante: 48 cas sur 54. Or, le phénomène contraire est négligeable, voire inexistant. Cette situation s'avère d'autant plus évidente si nous la comparons aux résultats obtenus à Batey del Soco où aucun cas d'interférence n'a pu être décelé. Seuls des mots créoles y ont été identifiés, bien que les pêcheurs d'origine haïtienne connaissent la plupart des noms espagnols. Le bilan de l'enquête nous autorise ainsi à penser que l'évolution linguistique dans cette région de la péninsule de Samaná va dans le sens d'utiliser de plus en plus l'espagnol au détriment du créole français ou du dialecte anglais local.

NOTES

- (1) Le projet *LIRD Lexique ichtyonymique de la République Dominicaine* est un projet pluri-disciplinaire et bilatéral qui a bénéficié de subventions du CRSH du Canada et a reçu notamment l'appui de la SEA (Secretaría de Agricultura) et du Musco de Historia Natural de la République Dominicaine. Nous tenons à remercier ces organismes. Le projet est dirigé par Lysanne Coupal, du département de langues et linguistique de l'Université Laval. Voir ici notre communication: "Contribution à l'étude du lexique ichtyonymique: compte-rendu des progrès du projet LIRD en République Dominicaine", **Congrès international des linguistes**, Québec, Université Laval.
- (2) Ichtyonymes créoles ou créolisés: 146; ichtyonymes de forme anglaise: 20. Nous remercions ici M. Alix Renaud pour sa patiente révision des formes créoles. Voir notre article: "Créolismes et formes hybrides dans l'ichtyonymie dominicaine", à paraître dans *Langues et linguistique*, no 19, 1993, Québec, Université Laval.

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ANANSE STORIES: LANGUAGE AND CULTURE IN THE ORAL TRADITION OF SAINT ANDREWS AND PROVIDENCE

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1. INTRODUCTION

This study is part of a more extensive Program in socio and ethnolinguistics on these two Caribbean islands off the coast of Nicaragua, involving the collection and/or recording, transcription and analysis of Islander oral tradition as told by members of four generations. Most of the first generation, the "story tellers", are now deceased and oral tradition in this sense is rapidly disappearing. However, Islanders are presently interested in recuperating this tradition and in finding ways of integrating their language, history and traditions into school and community life and programs. This process should now be receiving renewed impetus as the new Colombian Constitution of 1991 declared Colombia to be a pluriethnic, multilingual country and gave minority Indian and Afro-Colombian communities the possibility of determining and maintaining autochthonous processes of development, education, and local government with the support of regional and national government agencies.

This brief communication analyzes in some detail two of the most told 'Ananse Stories' - "Hansel and Gretel" and "My Father Riding Horse"-for Afro-euro-creole elements.

2. HYPOTHESIS

Living oral tradition stories of Caribbean creole cultures without a writing system or in the process of determining or reformulating one (as is the case on Saint Andrews and Providence where only some members of the older generations read and write in Standard English, Spanish being enforced as the official language of the educational system since the 1950's) should be very useful for 1) determining language patterns and shifts across generations and/or across a creole continuum as new cultural and linguistic elements are

added to the stories and many no longer significant elements are discarded; 2) analyzing discourse structure, language registers, syntax, phonology.; 3) obtaining elements of importance for the reconstruction of the ethnic history of the people.

The very process of recopilation of this material should also provide the opportunity to analyze the changing place and purpose of these stories in the community.

3. METHODOLOGY

The oral tradition stories analyzed were discovered/recuperated from 1) articles or publications (Friedema, 1964; Oral tradition on Old Providence, 1980; 2) recordings made at Cultural Center 'Concerts', or oral tradition workshops between 1985 and 1989 with school teachers and community workers, and some visits to older members of the community as well as informal conversations with school children.

Of the two stories dealt with in this paper, versions of "Hansel and Gretel", of known European origin, and "My Father Riding Horse", of a more likely Afro-Caribbean genesis, were analyzed internally (each version) and comparatively with the other versions of the same regarding the first three areas mentioned in the HYPOTHESIS. The fourth area is considered briefly in the conclusions.

4. RESULTS

The results presented here are a first attempt at analyzing a very limited selection of available material, but indicate the fruitfulness of a more extended endeavor along these lines.

4.1 "Hansel and Gretel" and "The Old Lady and the Boy"

	Simple past form	Simple Pres form	de + (v)	∅+ing
Text 1	32	82	0	8
Text 2	4	60 +6 (gaan)	4	4
Text 3	12	90	0	7
	am/is/was+ ing/adj	be(e)n+ ing		
Text 1	10	3		
Text 2	1	0		
Text 3	1	0		

The anterior marker *ben|men|wen* + simple verb form seems to be replaced by the simple past in versions 1 and 3 and text 2 did not require this aspect.

/wen/ is of generalized use on Saint Andrews, however.

4.1.a. Text 1. Hansel and Gretel.

Except for the little boy poking a lizard tail and not a stick out of the cage for the witch to feel, this seems to be a rather typical English-type narration in Islander English. However, the verb system alternates between that of English Creole and Islander English in the sense that the progressive forms occur both with and without the auxiliary 'be', and the simple past form is used from time to time (principally 'went' and 'was') but usually gives way to the simple present form. For example, there is alternative between 'say' and 'said'. The past tense form does seem to function 1) to introduce the story as a past event, 2) to indicate anterior (along with *ben + ing* in two instances where there are flashbacks in the narration). Other alternations: 1) *he| she |him* = witch; 2) *di children dem/ them two children/ those two children*. These alternations may not indicate linguistic insecurity, but rather stylistic variation. 'Now' does not seem to be used as an adverb of present time, but rather as highlighter (9 times).

4.1.b. Text 2. Hansel and Gretel.

In this text the 'candy house' of text 1 gives way to a 'cake house', 'children' are 'piknini', the 'lizard tail' is replaced by a 'rat tail', and finally the family dog goes out to find the children who have meanwhile escaped from the witch so that the father will stop meaning over their death: "so wen im get, di man did de muon and iz de get di man stop muon bekaz em de de, di dag gaan rait de an luk fi dem."

The narrative structure is quite representative of oral tradition stories with repetition of Key elements and less attention to logical sequencing and time of events. And, the language is definitely creole in both syntax and phonology. The only real past tense forms used are 1) the first four verbs in the story, 2) 'lef' which has replaced 'leave', and 3) alternation between 'go' and 'gaan'. The gerund form is used to indicate progressive ('gwain' and komin) but/de/ + verb is used with other verbs to indicate state and/or progressive. 'Now' 'iz' and 'did' are used as action highlighters; Ø = existence instead of 'is/was'. We also find /fi/ + noun/ pronoun and / fi/ + verb, but only one instance of 'to'; the 'modal/aspect + verb structure (ex. 'staat go', 'waan stan'); the reduplication of 'go/gaan' and 'kom' (emphasizer + directionality, possibly)- "sen di likl gyal go, go go sii if di bwai fat nuf." "wen im gaan, im gaan, gaan piip dong ina de pat."; 'neva' = negation; 'ina', 'kieri', and 'wen taim' for 'when' and 'once upon a time'.

4.1.c. Text 3 The Old Lady and the Boy.

This is obviously an Islander creation, a symbiotic narration, where elements from 'Hansel and Gretel' with an "enchantment" (song/refrain) repeated 5 times by the boy to make the old lady (witch) 'sanka' (dance) back and forth and all around until he finally conquers (kills) her. The words of the refrain do not relate to the story and they as well as the music should be analyzed to determine possible relations to African religious chants/songs. Both the narrative and grammatical structures could be placed mid-way between those of Texts 1 and 2 on some type of a 'discourse continuum': mostly simple present form for verbs; more 'to' than 'fi'; is/was/Ø instead of the creole [de] for existence; quite a bit of repetition of key elements.

All three texts use the S-V-O structure for questions.

4.4. "My Father Riding Horse"

Briefly, in this story Ananse (the Ashanti spider trickster) and Tiger are courting the Master's daughter and Ananse tricks Tiger into acting as his horse. Here, he loses face in front of the Master's daughter and runs off into the bush while Ananse runs into the Master's garden. The most elaborate narrative versions collected are similar to Text 1 ("the Old Lady and the Boy") in grammatical particularities although one version is told in real standard English past but ends with a typical "why story" explanation: "And from that day till today, Tiger lives in the forest. Anancy caused it." And, the traditional Afro-caribbean story ending: "Jack Mandora I don't choose any." The versions told by younger people are very reduced narrations of the main story line in English creole punctuated at times by expressions in Spanish such as "pelafta" (Colombian Atlantic coast term for 'girl') and 'chevere' (an approbatory interjection) as stylistic highlighters.

5. CONCLUSIONS

There is evidently a great wealth in linguistic and cultural information to be obtained from the collection, transcription and analysis of oral tradition stories, but they are seldom told now except at special events organized for this purpose. Young children seldom ask for bedtime stories and are mostly lulled to sleep by television in Spanish. However, this work with the participation of teachers, students and other members of the community is becoming a bridge between the past and the present and helping islanders to recuperate a sense of identity and an understanding of their roots.

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LIMONESE CREOLE: COHESION IN STORIES AND CONVERSATIONS

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1. ETHNOHISTORICAL BACKGROUND

Costa Rica, one of the five republics of Central America has harbored a black minority for over 400 years. This now Protestant and since the 1800's English-creole speaking population has lived mostly in the lowlands of the Atlantic coast, while Costa Rican society and culture--white, Catholic and Spanish speaking--tends to be considered as existing only in the highlands. While the African Black of the colonial period (1570 to 1870) disappeared by miscegenation, the West Indian Black of the late XIX and XX centuries, mostly Jamaican peasants, settled in Costa Rica to work for the United Fruit Co. His acculturation to Costa Rica was slowed by the *de facto* control of English-speaking foreign investors who, in order to strengthen their own power, preferred to foster separatism of their plantation and railroad workers from the rest of the country. English had therefore a prominent position in the life of the region, and Jamaican Creole was the communicative medium in family and communal life of the greater part of the black population of Limon. Out of this social situation developed a local linguistic entity which is here called Limonese Creole, spoken today by a black minority of approximately 40,000 people. However, after the Company withdrew from the Atlantic Zone (1942) and as a result of the 1948 Revolution, the unity of the Limonese Creole-speaking black community started to break down giving way to a rise of native Costa Rican prestige and power groups. Once outside the plantation system the West Indian Black began to adopt Costa Rican customs. First the process of acculturation and assimilation proceeded at a slow pace, but gradually he was transformed into a new cultural type: the Limonese Black. Although racially distinct from other Costa Ricans, he became a citizen of the country sharing national sentiments; he learned how to speak Spanish; and some even converted to Catholicism. However, since his exposure to Spanish has only taken place during the last forty years, some form of Limonese Creole is still basically his mother tongue. The link with English is nowadays being provided by family tradition, some schooling, religious ties, certain Jamaican bonds, imported media, tourists and U.S. investors.

2. LIMONESE CREOLE

Today Limonese Creole (from here on LC) is still extant as a creole of variation. Its different varieties can be best understood as an English-based, creole-to-standard continuum. At one end there is LC, which originally developed from Jamaican Creole (as mentioned above), and at the other, there is Standard Limonese English (SLE). This linguistic situation does not differ from others in the Caribbean where a creole and a standard language are spoken, except that in this case further linguistic diversification is presently taking place, because here the creole exists in the midst of a Spanish-speaking population.

This "standard-creole continuum" abstract concept is to a certain extent a fiction, however, in that neither the standard nor the creole are actually fixed reference points in the continuum. In reality, they are not separate entities, but part of a total language system against which language variability can be assessed. Speakers can manipulate their speech so that it becomes more formal and closer to SLE or more informal and therefore closer to LC. Although social conditions have changed since the times of plantation agriculture and African slave importation, LC is still socially stigmatized while the standard toward which it tends to decreolize enjoys social approval and prestige.

As might be expected, the speakers' attitudes toward the two poles of the continuum are extremely different. While SLE is "good" and acceptable English, LC is "flat talk," "patois," "broken English," "a dialect" called /mekaytelyu/(1) which is "bad" English. This in itself leads us to recognize that the language continuum is more than an interesting linguistic phenomenon: it has a social correlate of great import, since it is capable of eliciting strong emotions.

3. THE DATA

The texts to be analyzed were elicited in some 500 hours of recording sessions conducted during several field trips to Limon from 1973 to the present. Out of 250 interviews, a few dialogs and narratives will be selected as illustrations. (2) The dialogs usually consisted of conversations between my assistant (a native Limonese speaker himself) and the interviewee. The narratives are based on a 'speaker-(ideal) hearer' situation. The speaker was never interrupted and the listener was interested in everything the speaker had to say! The topics covered by the informants were supposed to answer queries expressed by the interviewer (audience). A narrative thus elicited is considered a subset of the whole set of personal narratives (Labov 1977: 244). He thinks them well suited for an inquiry into the general conditions that relate speech acts and actions.

4. OBJECTIVES OF THE STUDY

The ethnographic points made above about the language and its speakers make one wonder whether it is really possible for an outsider to seriously comprehend the communicative behavior of a speech community on the basis of one or a series of field trips, even if the field worker speaks the language.(3) It is with this proviso in mind that I propose to look at samples of conversations and stories elicited in Limon, Costa Rica. The main assumption upon which this

study is based on is that

...much of the structured variation that exists in language can be ascribed to the social nature of its use, and to the plurality of functions that it serves.

(Sankoff 1977: 60)

Thus linguistic differences can be created and maintained, even "where the segments of the population concerned are in regular and frequent interaction." (Gumperz 1964:137). This is true of generationally varied groups, or racially mixed groups, or even of groups of different gender composition. The question is how much variability can be tolerated without impeding communication, and what the sources and functions of this variability are.

The syntactic aspects of differentiation between the basilectal and acrolectal poles of Limonese Creole have been dealt with elsewhere and will not concern us here. Rather it is the varieties of linguistic phenomena in relation to nonsyntactic factors, as they appear in conversation and narrative strategies, that will be the focus of this paper.

This discussion is based on Deborah Schiffrin's and Deborah Tannen's work on discourse analysis. The aim of the paper is to determine what discourse markers are used by Limonese Creole speakers and how they function. It is hoped that the analysis of a different variety of discourse will contribute to devise more precise, cross-culturally valid terms and definitions for features, dichotomies and patterns, so that in the future more meaningful, and less *ad hoc* formalizations and theoretical generalizations can be made regarding discourse markers.

5. LIMONESE CREOLE DISCOURSE MARKERS' ANALYSIS

When a speaker and a hearer engage in conversation, there are a number of features which contribute to its success. Information is transmitted in a context which includes, among others, turn taking, the use of certain forms of address, frequent use of pronouns which agree with verb inflections, tenses, pauses and hesitations, silence, laughter, breathing phenomena, and a whole series of interactional markers (such as "well," "I mean," "you know," "and," "but," "so," "now," "then," "because," in Standard English; or in Spanish qué se yo, yo no sé, ah, bueno, cómo se dice, vamos a decir, es decir, y, digamos, por ejemplo, viste?, lo que pasa es que, la verdad es que, claro, te digo que, te juro que, me parece, mirá vos, te dás cuenta, me entendés?, así es que, o sea).

As partners in an oral exchange we do not only concentrate in the bits of information conveyed, but we also take in all the other features which contribute to the coherence of the message. As quoted by Schiffrin 1987:21, Gumperz's recent work (1982 and 1984) suggests that

communicative meaning is achieved through a process of situated interpretation in which hearers infer speakers' underlying strategies and intention by interpreting the linguistic cues which contextualize their messages.

These contextualization cues are verbal (prosodic, phonological, morphological, syntactic and rhetorical) and non-verbal (kinesic, proxemic). Crucial to Gumperz's model are culturally-defined repertoires of verbal and non-verbal devices. In what follows (in the paper) I will attempt to describe the most common discourse markers in the cultural context of Limonese Creole speakers and listeners. They account for some of the multiple options available to conversation partners in attaining coherence in their discourse. Deborah Schiffrin's classification of planes of talk in which markers operate (1987:316) will provide the framework for my discussion.

The following discourse markers are used in the Limonese Creole conversations analyzed and will be illustrated in greater detail:

- I. a. /layk se/ /mmm/
 - b. /miy dwon nwo/ /miy no nwo/ /miy neba nwo/
 - c. /se/ /layk/
- II. /ah/ /wel/
- III. /an/
- IV. a. /yuw andestan?/ /yuw nwo/
 - b. /de truw^t iz/ /wapen/ /yuw siy wapen/
 - c. /mekaytelyu/ /mekaytelyu somtin/ /miy tink/
- V. /bot/

An answer to the question 'what do markers add to discourse coherence?' is suggested.

NOTES

(1) /Mekaytelyu/ alternates with /mekatelyu/. The designation comes from Jamaican Creole which uses "make I tell you" meaning "let me tell you."

(2) As Deborah Schiffrin points out,

Cultures differ dramatically in terms of what speaker goals are culturally encoded in patterns of speaking as units of speech and in situations for speech. The rules for accomplishing what might seem to be the same for different cultures often differ tremendously, greatly complicating efforts for cross cultural comparisons of speech acts. (1987:11)

(3) It is not clear at this point whether the data obtained in a standard sociolinguistic interview may limit the types of texts that can be studied.

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PSEUDO-CREOLE:
THE OUTSIDERS' VIEW OF SLAVE SPEECH

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Early travellers and missionaries to the French colonies in the Caribbean, southern North America, and the Indian Ocean have left us samples of what purports to be the language spoken by slaves in those regions. These documents, if accepted as accurate, would be precious witnesses to the earliest forms of Creole and would give us a starting point for writing the history of the various French Creole languages. These citations pose many problems, since they present words and forms not used in the present-day Creoles of the region in question, or in some cases in any modern Creole. This could be explained by assuming that they represent a stage of the development of Creole at which the language was still unstable, with different lexemes and grammatical devices in competition. This may in part be true. But a close study of these texts leads us to another conclusion: they are not true reflections of the language actually used by slaves, but an idealized version of it filtered through the perception of Europeans, which we may call "Pseudo-Creole." This consists in varying degrees of actual observation of slave speech, though not necessarily that of the region from which the text purports to come, of generalizations as to how slaves "ought" to speak, and of the sort of "foreigner-talk" which Europeans used when speaking to "natives" in any part of the world. The authors often have ulterior motives--either to prove that Africans are simple people, unable to grasp the complexities of a real language, or on the contrary that the simplistic language the Europeans have forced on slaves stunts their intellectual development, and represents one of the innumerable injustices which demand an end to the institution of slavery.

For example, C. C. Robin, in his *Voyages dans l'intérieur de la Louisiane* (1807: 3.185-187), combines

these two themes as he discusses the alleged origins of Louisiana Creole: *Ces esclaves, en recevant la langue française pour leur idiome familier, n'ont pu en embrasser l'étendue vulgaire, puisque leurs besoins et leurs idées étaient plus bornés; il a donc fallu resserrer pour eux, ou plutôt dégrader cette belle langue.* The slaves (because of their ill treatment, and their being deprived of all normal social and religious life) are incapable of grasping the full extent of the beautiful French language, so it was necessary to limit it or degrade it for them. (Note, incidentally, that it is the European here who does the simplification, despairing of being understood.) Robin goes on to speak eloquently of the loss of the verb conjugations, which, he claims, deprives slaves of a past and of a future and condemns them to live in an eternal and uncertain present. He illustrates this with the following example: *Moi couris hier, toi couris aujourd'hui, ly couris demain.* There can be little doubt that Louisiana Creole by this time already possessed the normal set of preverbal aspectual particles, the subtlety of which was, alas, beyond the comprehension of the limited mind of the author! Robin does document the extension of use of verbs like *courir, connais, and gagner*, of which the first, shifted from the meaning 'run' to the general 'go,' is specifically Louisianan, the others common to most Creoles. It is more surprising to find *couri* used as an example in a text of the same period purporting to represent Mauritian Creole (reprinted in Chaudenson 1981: 80): *Où vous couri, papa? Mô couri bitation, donc.* This is translated as *Où allez-vous, mon garçon? Je vais à l'habitation, donc.* Since the verb *couri* is not found in Mauritius, it is here clearly Pseudo-Creole. That the Louisiana citations are Pseudo-Creole too is proven by Robin's further remarks that *ly* replaces all the pronouns and is used as an article: *ly chapeau, ly nègres, avec ly, ly manger, ly dormir...* The use of *li* as definite article is also found in many of the nineteenth-century Indian Ocean texts collected by Chaudenson (1981), and has probably always been Pseudo-Creole. The true Creole usage of postposed *là* as definite article (in Louisiana as in Mauritius) is ignored.

In some cases we may suspect that the author has some knowledge of Creole, but confuses the usage of different regions. For example, there is the fascinating citation from Bossu 1777: 83 (called to our attention by Neumann 1985: 196, n. 1) supposedly representing Louisiana Creole: *Vous pas mire donc Maître à moi, ça Caïman qui mange monde? Moi déjà vu bête tant grosse comme ci-là, qui gagne ferdoches en*

haut dos à ly. ('Don't you see then, my Master, that alligator which eats people? I've seen an animal as big as that one, which has branches on its back.') The past participle *vu* warns us from the start that we are dealing with Pseudo-Creole, and in any case this is not Louisiana Creole, where the possessives precede the noun. The use of *mire* for 'look' and the possessive attached by *à* take us to the Antilles, and in particular to Guadeloupe. The preposed *ça* as demonstrative suggests rather French Guiana or the Indian Ocean Creoles. This is then a kind of idealized Creole, composed of traits from various regions (and quite likely represents the way the author himself would have spoken when attempting to communicate with slaves). Note that this passage occurs in a chapter devoted to somewhat suspect "explorers' tales" about the ferocity of the alligators in Louisiana, and is simply a case of an attempt to provide "local color."

Although Pseudo-Creole is not to be taken too seriously as a witness to the way slaves actually spoke, then, it is important in other ways. First, it may give us a good idea of the kind of language Europeans used to communicate with their captives, and therefore of the nature of the French input to what would become Creole. If Louisiana Creole does indeed use *courir* for *aller*, it is quite possibly because this was what its originators were taught to say. Second, Pseudo-Creole may help explain the transmission of Creoles from one region to another--why the later Creoles, such as Louisiana or Mauritius, appear at times to show a mosaic of features from different sources. Third, it can warn us of the possibility of the same phenomenon occurring in other parts of the world, involving other languages.

As to the first point, we have samples of early European "native talk" in the passages by Fathers Chévillard and Pelleprat quoted in Goodman 1964: 104-105. These do not claim to be Creole, to be sure, since they admittedly represent the way the Europeans talk to their slaves, not the speech of the slaves themselves (Chévillard, for example, describes it as *le langage de l'european, langage volontairement corumpu pour faciliter sa compréhension--a language deliberately corrupted to facilitate [slaves'] understanding*). Pelleprat speaks in terms of an accommodation: *nous nous accomodons à leur façon de parler qui est ordinairment par l'infinitif du verbe..."* ('We accommodate ourselves to their way of speaking which is ordinarily by the infinitive of the verb.') This is similar to Robin's concept--the slaves have trouble grasping the complexity of the

Europeans' language, so the latter must simplify it for them. Chévillard does indeed present infinitives, even in the case of modal auxiliaries which are transmitted to Creole in other forms: *toy sçavoir, moy vouloir.* (Normal Creole *sa, sav* and *vlé, lé.*) He also uses Carib jargon (*mouche manigat*) and pidgin terms which do not survive in Creole (*pequins*, from Portuguese). Pelleprat does use *voulé* and *savé*, but also point as negative, and expressions such as *femme d'autrui* which are hardly likely to have been used by the slaves themselves. He, like Robin, says the slaves' speech contains no tenses, but that time is expressed exclusively by adverbs when necessary: *demain moi manger, hier moi prier Dieu.* This cliché again ignores the virtual certainty that at least some preverbal particles, such as the universal *té* 'perfective,' were part of the original input, and used from the beginning by slaves as by their masters. (Compare the world-wide Pidgin English *bin*.) It was not, of course, in the first place the missionary fathers who were the source of the language learned by slaves, but rather traders and colonists, who had a stock pidgin for use with foreigners, especially "natives," and who would not have known what an infinitive was!

Pseudo-Creole, then, deserves to be taken seriously. It is not an accurate rendition of the way slaves spoke at the time, but it gives us a precious glimpse of the way Europeans talked to them, and that in turn provides further evidence about some of the factors involved in the complex process of creolization.

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RELEXIFICATION ET CRÉOLOGENÈSE

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Depuis tout au moins Paul (1880), on distingue deux processus de changement structurel accéléré qui s'excluent mutuellement comme modèles explicatifs de la genèse d'une variété linguistique nouvelle: (1) la regrammaticalisation en profondeur d'une langue superstratale qui renouvelle la syntaxe et la morphologie, conservant les racines lexicales; et (2) la relexification en profondeur d'une langue substratale qui remplace les racines lexicales, laissant intacte la syntaxe et la morphologie d'origine. Dans la regrammaticalisation du superstrat, l'adaptation des formes lexicales à la nouvelle morphologie favorise la régularisation des paradigmes et l'émergence d'un lexique reconstitué, sémantiquement transparent en surface, où des formes du type de *bananier*, *(il te l')apporte, comment* sont remplacées par des analogues du type de *pied de banane*, *(il le) prend (te) donne, de quelle façon* plus proches de leur interprétation en Forme Logique. Dans la relexification du substrat, les formes lexicales importées subissent la régularisation des paradigmes en vue de leur adaptation à la morphologie déjà existante du substrat et le lexique qui en résulte continue à être (au niveau de la Forme Logique) sémantiquement isomorphique à l'ancien tout en adoptant (au niveau de la Forme Phonétique) une physionomie sémantiquement opaque (l'opacité pouvant avoir une fonction linguistique "cryptique"). Chacun des processus conduit éventuellement à l'émergence de variétés linguistiques nouvelles dans des conditions sociales propres à son élaboration. Ainsi, la réfection de la syntaxe d'une variété linguistique est liée au contexte d'élaboration d'une koiné véhiculaire universellement accessible à une population nouvellement constituée d'origines linguistiques diverses. Le processus d'élaboration d'une variété relexifiée, par contre, n'exige aucun changement d'allégeance linguistique de la part des locuteurs mais résulte, au contraire, de pratiques sociales endogamisées qui sont caractéristiques de l'édification d'une identité collective séparée. On qualifie traditionnellement les produits de la resyntactification de *créoles* quand ceux-ci sont *nativisés*, et de *pidgins* quand il n'y a pas eu *nativisation*. Dans le cas de la relexification, on parle de *jouals* quand la nouvelle structure sublexical a été élaborée sur le modèle d'une autre langue, étrangère à la communauté (Wittmann 1973), et d'*argots* quand la physionomie nouvelle du lexique est le résultat d'un procédé transformationnel *natif* (cf. Lashley 1951:185, Mandelbaum-Reiner 1991). Il découle de l'incompatibilité phylogénétique des deux processus qu'un créole ou un pidgin n'est pas un *joual* ou un *argot* et qu'*un joual ou un argot ne peut pas être un pidgin ou un créole*.

Dans la dernière décennie, deux hypothèses de genèse par relexification ont retenu plus particulièrement l'attention des chercheurs: celle de Muyken (1981,

1988) qui présente la media lengua comme une variété relexifiée du quechua, avec un vocabulaire emprunté à l'espagnol; et celle de Lefebvre (1986; et al. 1989a, 1989b) qui pose le créole haïtien en variété relexifiée du fon, avec un vocabulaire emprunté au français. Malgré une collaboration étroite dans le domaine dans ses débuts, les deux hypothèses se révéleront bientôt théoriquement incompatibles. Contrairement à Lefebvre, Muysken n'a jamais essayé de présenter la media lengua comme un créole. Une première contrainte réelle sur la relexification est formulée avec rigueur: (I) Seulement les racines lexicales peuvent être relexifiées, les particules fonctionnelles (affixes, clitiques) n'étant affectées qu'accidentellement. La collaboration subséquente de Muysken avec Smith (1990) permettra d'énoncer en corollaire, sur une base d'exemples dépassant la media lengua, deux autres principes: (II) L'action historique d'un substrat X dans l'élaboration d'une langue Y n'est évidente en rétrospective que si des formes phonétiques indubitablement héritées du supposé substrat font surface dans la langue Y; (III) La transparence sémantique apparente dans les langues créoles résulte d'une stratégie d'élaboration propre à la créolisation (une sorte d'extension sémantique au bioprogramme de Bickerton) et exclut la relexification comme modèle possible de formation de ces langues.¹ Le désaveu de Lefebvre par Muysken & Smith est prévenant mais clair et net: l'hypothèse d'un substrat fon dans le créole haïtien est hautement invraisemblable eu égard à la quasi-absence dans le créole de formes phonétiques du fon et l'isomorphisme inattendu des systèmes au niveau de la juxtaposition des éléments dans les composés (ce dernier jugement visant visiblement non seulement des formations comme *ki-jan* mais aussi *pye-banan* et *pran-ale*).²

D'autres critiques du travail de Lefebvre ont été beaucoup moins prévenantes (voir notamment Dejean 1982, Wittmann & Fournier 1983, Fournier 1987, Wittmann 1987a, 1991, Bickerton 1988, 1990, Chaudenson 1990a, b). Parmi les objections soulevées le plus souvent, on rencontre particulièrement: (a) l'absence de base historique et sociale; (b) l'absence de fiabilité dans les méthodes de recherche (la démonstration de l'isomorphisme des systèmes fon et créole est truquée; la comparaison du créole avec le français escamote les données du français populaire et des créoles blancs); (c) l'absence de fiabilité des données sur la syntaxe du créole, du fon, voire même du français; (d) l'imperméabilité à toute critique extérieure et l'habitude de se citer en famille, le plus souvent sur la base de manuscrits non publiés inaccessibles à la critique. Chaudenson (1990b) va jusqu'à soulever le spectre de la fraude scientifique.³

Pourtant, l'hypothèse d'un substrat dans les créoles français des Antilles et de la Guyane qui sont tous mutuellement intelligibles, voire construits sur le même modèle, n'est pas sans mérite en autant qu'on reconnaît que le créole des Noirs est aussi parlé par des communautés isolées hautement endogamisées de Blancs et d'Indiens, à Saint-Barthélemy et dans les savanes de la Guyane brésilienne, par exemple. Ces derniers notamment parlent un créole français attesté depuis le début du 18e siècle qui n'a pas pu leur être transmis par les Noirs du reste de la Guyane. Ces Indiens sont les derniers survivants d'une peuplade mixte dont la langue, le kariphuna (ou galibi), était la langue véhiculaire des Antilles et de la Guyane à l'arrivée des premiers Européens (le "canibal" de Christophe Colomb). Le kariphuna, contrairement au fon, nous a été décrit par des missionnaires et des voyageurs dans de nombreuses grammaires et dictionnaires depuis le début du 17e siècle et est la langue maternelle d'un nombre important d'anciens esclaves qu'on dit originaires du Dahomey, déportés en Amérique centrale à la fin du 18e siècle. Le kariphuna se présente comme une langue arawak relexifiée à vocabulaire karina, le karina comme une langue caribe à vocabulaire tupi. Il est invraisemblable de prétendre qu'une langue véhiculaire aussi ouverte que le kariphuna n'eût pu s'ouvrir à un nouveau superstrat, le français des Petits Blancs, et que ce créole karipoun n'eût pu être adopté au cours

du 17e et du 18 siècle par ceux des esclaves africains qui n'avaient pas déjà opté pour le "vrai" kariphuna comme langue maternelle. C'est la seule hypothèse qui explique de façon satisfaisante l'existence du créole karipoun dans les savanes de l'Ouassa, toujours en contact intime avec une peuplade parlant le "vrai" arawak,⁴ et qui puisse être étayée par de nombreuses formes phonétiques à la surface du créole (pas moins d'une soixantaine de racines lexicales non relexifiées et une douzaine de particules fonctionnelles maintenues, par conflation ou directement).⁵

NOTES

1. La portée du 2e principe se trouve peut-être atténuee par l'action de ce que Khim (1989) appellera la "conflation", soit la possibilité que la condition inhérente au 2e principe puisse être satisfaite par les items du supposé substrat qui en Forme Phonétique et en Forme Logique convergent sur des items correspondants du superstrat.

2. Muysken & Smith notent également que les formes phonétiques transparentes du système-Q en fon alternent avec des formes opaques et que ce sont ces dernières qui apparaissent en surface en saramaccan ce qui milite historiquement contre la diffusion de formes transparentes dans les Amériques. Dans la même veine, on peut faire valoir que selon Schlegel (1857) et Westermann (1939) la sérialisation du verbe a fait son apparition dans les dialectes du groupe éwé (dont fait partie le fon) seulement au cours du 19e siècle. Hyman (1975) suppose une diffusion récente par contact d'est en ouest.

3. Depuis la parution de cet article, un interdit frappe la revue qui a osé. Au Québec, la fraude scientifique n'existe pas.

4. Les locuteurs de ce créole se qualifient eux-mêmes de Galibis ou de Mounes-Ouassa. Les derniers bribes du kariphuna substratal ont été notées dans la communauté par un anthropologue en 1926. L'ethnonyme Karina était utilisé indifféremment en karina et en kariphuna ce qui a amené le colonisateur français à confondre sous "Galibi" les deux groupes. Kariphuna (Indien rouge) tire son origine du langage des femmes (cf. Wittmann 1987b).

5. Comme courte liste de particules retenues, je propose: *ake* "avec, et"; *balpu* "à, pour" PRÉP-ASP-COMP (par conflation inverse avec *ba* "aller, but, fin" FUT-COMP et *pu* "à"); *k-a* "devenir, (se) pouvoir" (remplace dans les autres créoles *ape* ASP); *ka-ba* "fini, après (ADV)" (conflation additionnelle avec espagnol *acabar* "achever"); *ki* "quel"; *ki-sa* "quoi", la DÉM-ART (<*l(i-h)a* "ce ... là"); *l-i* "il, son" PRO-POSS (avec les mêmes règles phonologiques); *ni* "ni"; *pa* NÉG; *pu* (cf. *ba*); *sa* "quoi, ça, c'est"; *t(e)* TEMPS; *yo* "ils, leur, -s" PRO-POSS-PL. Dans le lexique retenu du kariphuna, on remarque le grand nombre d'items conservant le privatif *ma-* (par conflation avec *mal*) et l'article féminin agglutiné *-t* (par conflation avec *-ette* du français) comme dans: *mabuya* "mauvais génie, lézard (sp.)", *se remuer*", *mafya* "esprit malveillant, canaille", *makwa* "sans élégance", *makwali* "mal bâti", *manarè* "crible (de farine de manioc)", *mapu* "kapokier", *marasa* "jumeaux", *maraka* "hochet (de calebasse)", *marengwen* "moustique", *masisi* "sans testicules", *matutu* "plat de crabe", *mazora* "sans dents", *kannò-t* "barque, canot", *kare-t* "tortue de mer", *kayimi-t* "caïmite", *maku-t* "sac en paille", *pipiri-t* "petit oiseau (sp.)", *ravè-t* "blatte, cacrelet", *zandoli-t* "lézard (sp.)". Le kariphuna a aussi des voyelles nasales, comme le français.

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SOCIOLINGUISTICS ASPECTS OF LANGUAGE CONTACT IN HAITI

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1. INTRODUCTION

The natural languages of the world are never spoken in a fixed or uniform manner. They are all subject to variation. Variation is generally determined according to situational factors (language registers), geographical regions (regiolects), and social classes (sociolects). Haitian Creole is not exempt from language variation and there are several studies that document the existence of regiolectal and sociolectal variation (Fattier-Thomas: 1984; Valdman: 1988, 1989, 1991). In this paper, the latter type of variation will be addressed. In Haiti, two major social and linguistic groups can be identified: The monolingual speakers of Creole, who compose the rural and lower urban masses, and the bilingual speakers of French and Creole who form the elite. The former group speaks a basilectal variety described by Fattier-Thomas (1984) as "Creole rèk" and the latter, an acrolectal variety referred to as "Creole swa". The political changes that took place in the country in 1986, when Jean-Claude Duvalier -- the then President for Life -- was forced to leave the country, have had a considerable impact on its linguistic situation. One of the most significant linguistic consequences of such events has been undoubtedly the introduction of Creole to fulfill vehicular functions, notably in the media and in the administration. Indeed the constitution of March 1987 recognizes the official status of Creole, making it equal to French. The prodigious expansion of the domains of the use of Creole is the work of the bilingual speakers who have become the primary conveyors of the vernacular language. This major sociolinguistic change has had repercussions on the structure of Haitian Creole. A strong degree of frenchification (borrowing, interference and code-alternation) characterizes the variety of Creole employed in its newly acquired domains. For this reason, it has been suggested that Haitian Creole is undergoing a process of decreolization. Fattier-Thomas (1987: 117) observes that Haitian Creole is in a state of "great entropy" and wonders if this entropy is not going to lead to a continuum created by the fusion of Haitian Creole with French. The notion of decreolization or a post-Creole continuum, which has been advanced by many Creolists (DeCamp: 1971; Bickerton: 1975; Rickford: 1986) to describe the merger of a Creole with its lexifier language, is the focal point of the present paper and is challenged with respect to Haitian Creole. The term "decreolization" used to refer to the drawing together of Haitian Creole and French is misleading as it fails to take into account the phenomenon of language variation. As stated above, there exists two major sociolects of Haitian Creole: The variety spoken by the monolingual masses, which I call Rural Monolingual Haitian Creole (RMHC), and the variety spoken by the urban bilingual minority which I refer to as Urban Bilingual Haitian Creole (UBHC). Therefore, with respect to the issue of possible decreolization of Haitian Creole, which variety is targeted?

2. IS THERE DECREOLIZATION IN THE UBHC?

Most descriptions of the Creole variety of the bilinguals speakers have underlined its frenchified features (including the phenomenon of code alternation) which presumably make it distinct from the variety spoken by the monolinguals. (Valdman: 1970, 1986, 1988, 1989; Fattier-Thomas: 1984; Zéphir: 1990). Since space does not permit a detailed discussion of these features, we will recall only the most salient structural ones. On the phonological level, UBHC has three additional front rounded vowels: **u** contrasting with **i** (*duri* vs *diri*, *riz* "rice"); **eu** contrasting with **é** (*paskeu* vs *paské*, *parce que* "because") and **eù** contrasting with **è** (*peù* vs *pè*, *peur* "fear"). In addition, UBHC tends to preserve the French postvocalic **r** as in **èr Florida** (Air Florida). On the syntactic level, its most salient frenchified features are the use of the direct object relative pronoun **keu** and that of the subordinator **keu** "que" (that), and the syntactic relator **deu** in attributive constructions (*yon seri deu pwoblèm* vs *yon seri pwoblèm* "a series of problems"). On the lexical level, this variety of Creole is characterized by a high proportion of borrowings and calques from French. The influence of the lexifier language on UBHC can not be denied and even seems to lend support to the decreolization theory. However, a closer look at this sociolect suggests that it is also influenced by the other variety, namely RMHC. Indeed, many features of the dialect used by monolinguals are also employed by the media, by government officials and, as Valdman (1991: 85) rightly notes, by bilingual speakers who want to affirm their Haitian identity and "wish to signal their solidarity with their less affluent compatriots". This tendency was noted by Fattier-Thomas (1984: 45) when she remarked that features from RMHC can be found in UBHC, but she failed to adduce supportive evidence. Presently, UBHC is being crossed by two currents: One coming from above, that is from French, and the other coming from below that is from the basilectal variety. To talk about the decreolization of the bilinguals' sociolect is to ignore or discard this very critical aspect of the linguistic change that is taking place. Let me now offer evidence in support of the influence of the monolinguals' dialect on the bilinguals' dialect.

The proponents of the decreolization theory built their case largely on the basis of the large amount of French borrowings found in the bilingual speakers' discourse. However, a closer look at the very same discourse reveals the infiltration of an equally large amount of lexical items coming from the basilect. Since the political events of 1986, the word **dechoukay** (destruction), which has nothing to do with French, has made its entry into the repertoire of the bilingual speakers. Similarly, the famous rallying cry of protest against the former National Council of Government **rache manyòk ou, bay tè a blanch** (uproot your manioc, clear the land completely) is a metaphor that has basilectal origin. The speech of President Aristide and various radio stations broadcasts provide numerous illustrations of such words and expressions. For the sake of brevity, a limited number of these are listed here:

	RMHC	UBHC	FR	GLOSS
1.	lòt bo dlo (ayisyen isit, tankou Ayisen lòt bò dlo "Haitians here as well as Haitians abroad")	laba	à l'étranger	abroad
2.	ti rale mennen vini (nou vin fè yon ti rale mennen vini sou lavi peyzan "We are here to talk about the life of the peasants")	koze	causerie	talk

	RMHC	UBHC	FR	GLOSS
3.	desann drapo	sispenn	cesser	stop
	(pou nou kabap fè lavi chè a desann drapo l "in order for us to stop the high cost of living")			
4.	kaba	sispenn	cesser	stop
	(fè lenjistik kaba l, "stop injustice")			
5.	bout	kont	assez	enough
	(bon jodi a, sa bout. "Well today, this is enough/over")			
6.	pote kole	solidarize	solidariser	support
	(y ap pote kole avèk nou "they are showing solidarity with us")			
7.	fè lòbèy	fè dezòd	altercation	altercation
	(li vin fè lòbèy. "he is here to start an altercation")			
8.	konpayèl	zanmi	ami	friend
	(y arete konpayèl li. "They arrested his friend")			

In addition to the integration of basilectal lexical units into the higher variety of Haitian Creole, a strong use of proverbs and idiomatic expressions that do not have readily available French equivalents can be noticed in the discourse of bilingual speakers. Indeed, President Aristide adds a basilectal flavor to his speech through the use of such proverbs and idioms:

- si ou al chèche fouye zo nan kalalou
"if you dig thoroughly"
- Bourik travay pou chwal galonnen
(the donkey works so the horse can get the reward)

Thus far, I have provided data to support the claim that RMHC exerts a marked influence, at least on the lexical level, on UBHC. Moreover, there exists additional evidence to demonstrate that this influence can be seen at the phonological and syntactic levels as well. Valdman (1991: 81-84) proposes that the nasalization of the definite determiner allomorphs in the context of oral segments is an indicator of changes coming from below (**tè la** vs **tèt lan** "the head"). Furthermore, an in depth analysis of UBHC reveals that the front rounded vowels discussed above are not categorically used by bilinguals. Indeed, **deupi** "since" is realized as **depi** on many occasions on the radio broadcasts we recorded. The same is true for **valeù** "value" realized as **valè**; **preùv** "proof" as **prèv**; **enjustis** "injustice" as **enjistik**. Likewise the post vocalic **r** does not occur all the time (**pousan** realized as **pousan** "percent"). The presence of the subordinator **keu** typical of UBHC is also not categorical as illustrated by President Aristide's statement:

nou rann nou kont ø genyen 87.75 pousan ayisyen nan mòn
(we realize that they are 87.75 Haitians living in the mountains)

The absence of these so called frenchified features could suggest that there is a conscious effort on the part of the militant bilinguals toward "de-frenchification". Savain's (1992) latest edition of a handbook on Haitian Creole Grammar attests persuasively to this effort.

3. CONCLUSION

I have shown that UBHC is equally influenced by French and RMHC. Therefore, the term decreolization, which implies only an influence from French,

does not adequately reflect the dialect contact situation of Haiti which is not unidirectional. If decreolization is to take place in Haitian Creole, it will probably be at the level of the monolinguals speakers as they attempt to reproduce the more prestigious (frenchified) forms of the bilingual speakers speech, in an effort to increase their chances of social mobility. This attempt results quite often in cases of hypercorrection (*kola sutadèl* for *kola sitadèl*; *elut* for *elit*). However, without detailed descriptive studies of the lower variety, one is hard put to document the spreading of these frenchified features to the extent that it can be termed, indeed, "decreolization".

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SECTION 15

HISTOIRE DE LA LINGUISTIQUE

THE HISTORY OF LINGUISTICS

THE SAUSSURE MANUSCRIPTS AT HARVARD: PRELIMINARY CONTEXTS

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Bms Fr. 266, the Ferdinand de Saussure manuscript collection at Harvard, contains several interesting pieces. These include his earliest known essay, written for his childhood mentor, Adolphe Pictet; a long manuscript on phonology; and a few pages of an early draft of his well-known *Mémoire*. Though fragmentary, the recently foliated collection does, when juxtaposed against items in the Bally, Ferdinand de Saussure, and Horace-Bénédict de Saussure archives in Geneva, give us a deeper picture of the intellectual life and working habits of a master scholar-teacher.

The Harvard collection includes papers from throughout Saussure's life, though the individual lots are not in chronological order. For example, Lot One is a handwritten text, with many pages cut away, of Saussure's dissertation, and Lot Six contains many of the notebooks in which Saussure jotted notes, citations, and comments for that dissertation. Saussure kept his earliest notebooks and wordlists, adding notes throughout his life that were keyed to topics he anticipated developing. In this brief examination of Lot Six, we can see Saussure's long-standing interest in ways to interpret text in its cultural contexts: for example, Saussure's comments about the Parnassian poet, Leconte de Lisle, include a series of insights in the several drafts of either a lecture or of a letter he apparently intended as a reply to a student query. The drafts, which are at Harvard, contextualize entries in folders in Geneva.

When we look at the papers in the Harvard collection, we must, then, read them in the context of his other papers, most of which are in the archives at the University of Geneva. However, not all of these papers are in the Saussure archives: many of Saussure's writings are in the Charles Bally archive; letters from the young Saussure to his father are in the archives of Henri de Saussure; and a series of letters and notes over twenty-plus years is preserved in the papers of Amé Pictet (Davis 1989). To work with Saussure's papers is to work with a mosaic, patiently examining each scrap, each page, for its connections.

Lot Six, a collection of notes on linguistics, contains 377 sheets, most of which are connected with matters Indic. Notebooks and lists, citations and illustrations from his research for his dissertation make up most of the Lot; pages 2 - 9 of the catalogue at Harvard give some cross-references to the reprint of the

dissertation in the Recueil (Saussure 1970). However, interfiled with the various notebooks are additional materials: notes on Hindu theosophy and history (ff. 18-19, 48-88), comments on the Hindu theory of composition (ff. 328-329), and a series of notes on the legend of Cunacepa, Valmiki, and the Poemes tragiques, this last presumably by Leconte de Lisle. Let us pause with these last, for they show Saussure's typical mode of work on a knotty problem.

FF. 99-101 is a letter, 9 décembre 1891, from a student, with questions on Leconte de Lisle and 'the death of Valmiki'. Saussure made several drafts for a response; we do not have a copy of the letter, nor can we verify that it was, indeed, sent as a letter. After all, Saussure busied himself for years with the study and teaching of Sanskrit language and literature. What we do have are at least seven fragments, though the fragments precede the letter in the order of foliation. The first lines give an idea of how Saussure wrote and rewrote, looking for just the right phrase or word, in order to explain to the student, to a class—and possibly to himself—some interesting aspects of text and transmission:

- f.6 #3. La fin de Valmiki est-elle une simple fiction inspirée par le nom du poète?
- f.7 9. #3. La fin de Valmiki est-elle seulement une fiction inspirée par le nom du poète?
- f.8 Cunaçepa. —La légende de Cunaçepa...est une des plus célèbres
- ff.9-10 Les Poèmes tragiques ne contiennent pas un morceau relatif... [10v] Cunaçepa - La légende... est une des plus anciennes
- f.11 Cunaçepa...est une des plus connues
- f.12 (Je suis très peu versé dans la littérature sanscrit...)
- f.13 N'ayant pas eu à aborder les choses de l'Inde

In the series of notes, written on notecards, slips and half-slips of paper and small notebook pages, Saussure worked to clarify the extent to which two poems by the Parnassian poet, Leconte de Lisle, both did and did not draw on Hindu literary tradition and to what extent the poems did or did not represent Sanskrit studies.

The critical edition of Leconte de Lisle's work by Edgard Pich (Paris 1977) presents the history of the various appearances and revisions for de Lisle's "Cunacepa" and "Le Mort de Valmiki": a new edition of the Poems Antiques appeared in 1891, and may have been the impetus for the student letter. Saussure, while pleading a lack of mastery in Sanskrit literature, was concerned to explain several rather tricky points: the personnages and the events in the poems by de Lisle were drawn from Sanskrit literature and Hindu religion, but were the poems 'imitations' of Vedic hymns? Hardly. Was the poem on the death of Valmiki a fiction inspired by the name of the poet? Without doubt. With great care, in several drafts, Saussure outlined the various texts in which historical and mythic personnages appeared, editions of which could have inspired Leconte de Lisle to create his own poems, but those poems could not be taken as any sort of index to understanding Sanskrit literature or language. For example, the name "Bhagavat" is used in de Lisle's Poems antiques:

Ce nom qu'on peut traduire par Béatus est une des épithètes habituelles de Vishnou, quoique appliquée aussi selon les cas et selon les sectes à <d'aut> Civa et à d'autres dieux.—C'est sans doute le

Bhāgavata-Purāṇa édité et traduit par Burnouf qui aura servi de texte ou de prétexte à la pièce de Leconte de Lisle....[f [7v];> biffée]

Though Saussure pled a lack of acquaintance with Sanskrit literature in his series of notes about de Lisle's poems, in fact, he was more than well-acquainted with the Vedic hymns and other works, from his study of the genitive absolute. We see, in his careful notation, his rewriting of terms and definitions, his well-known working habits, which he habitually extended to those who studied with him. Quite a few of the notebooks in the Geneva archives that are catalogued under Charles Bally show the same care. A number of the notebooks for specific courses contain major segments by Saussure, with Bally's annotations in shorthand. In one notebook (for Old English), Saussure drew red- and blue-penciled maps to explain dialectal features; in others, he added commentary, sources, citations. A series of notebooks contain slips for a dictionary of Sanskrit roots, in Saussure's hand as well as Bally's; still others include class exercises and a workbook-text for composition in Sanskrit. But we may look at the Valmiki fragments for more than Saussure's habits of writing to students and to self: we can remind ourselves of his interest in metrics, in patterned poetry, and—given the other fragments in Harvard's Lot Six—his interest in the composition and delivery of oral and formulaic poetry.

While researching his dissertation, Saussure would have encountered a number of the so-called 'pattern poems' in Sanskrit (see Jha 1986, Kapadia 1954-6). Bradford's recent study of "The Visual Poem in the Eighteenth Century" (Bradford 1990) rebraids several threads in visual poetics, tying the visual to the aural complex in ways that remind us of Saussure's long work with anagrams. At the time of his dissertation, however, Saussure was interested in other kinds of patterns: the genitive absolute construction occurs in Sanskrit primarily with certain verbs of perception, and in certain contexts where it gives the sense of hearing actual speech. Given his life-long interest in the ethnographic, we may want to look at the pragmatic context for the construction, rather than at the construction by itself.

The context in which we find Saussure's work is, like that work, fairly complicated to establish. To look at his teaching, we go back and forth between two libraries, and the archives of several scholars. To see more of his habits, to begin to understand the quality of the wit and charm that attracted fine students, we can turn to some recently discovered letters, in the Amé Pictet collection. They begin with letters of invitation to dinners—including a forecast of what Saussure will study—and comments about their mutual friends from school. Over the next few years, they include comments about Leipzig, progress on the dissertation: comments from one old friend to another, a bit older, a bit more worldly-wise, both in their early twenties. At the end of the collection: calling cards, brief notes of condolence.

A final calling-card in the Geneva archives, which puts a period to this brief contextualization of part of the Harvard collection, is Saussure's outline for the organization of his grandfather's letters, recently discovered in the Horace-Bénédict de Saussure collection. Like the collection of slips for Sanskrit lexical items, and like the bricolage of fragments on Valmiki, the outline is thematic: there is a unifying plan, a system, and a precise layout for immediate visual interpretation. The handwriting is shaky, but recognizable; the plan, the system, is firm.

A final contextualization is suggested by the format of Saussure's proposed catalogue for his grandfather's papers: the way in which he planned to organize them for the Geneva library, and the organization of his earliest notebooks, in the Harvard collection, amplify our understanding of his systematicity and range of interests. The Harvard fragments, when seen in the context of the larger collection in the Geneva archives, add to our understanding of Saussure's intellectual development and historical context within the discipline.

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Ms Saussure 245

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Ms Saussure 223

Saussure's catalogue and plan for collection of correspondence of grandfather, Horace-Bénédict de Saussure

Ms 5127 - 5129 Charles Bally

5127 Notebooks: Gothic, Old High German, Old Norse, Old English [this last dated 1899-1900]. Marginal notations by Saussure and dialect maps, one in red and blue pencil

5128 5 Notebooks [1903-1906] La verbe indo-européen; Saussure in own handwriting, Bally's notes in shorthand

5129 [1906?] Notebook, titled 'Cours de Sanskrit de Ferd. de Saussure'. Largely in Saussure's handwriting

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Bms Fr 266. Saussure, Ferdinand de, 1957-1913

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BRIDGING SAUSSUREAN STRUCTURALISM AND BRITISH LINGUISTIC THOUGHT

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1. INTRODUCTION

Criticism of the fundamental Saussurean oppositions begins among British linguistic thinkers with C. K. Ogden and I. A. Richards and continues through the work of Bronislaw Malinowski, Alan Gardiner, and J. R. Firth. But various commentators such as Gordon (1982a, 1982b), Russo (1989), Shusterman (1989), Harris (1988) Taylor (1988), and Nerlich (1992) imply the possibility of an accommodation between British linguistic thought of the first half of the twentieth century and the Saussurean views against which it reacted. This paper explores that implication.

2. OVERVIEW OF CRITICISM OF SAUSSURE

Ogden & Richards reject three cardinal ideas set out in the CLG: the oppositions signifiant/signifié, langue/parole, signification/valeur. For Malinowski, as for Ogden & Richards, the langue/parole distinction is irrelevant. Gardiner's criticisms of Saussure run parallel to those of Ogden & Richards with respect to the concept of the linguistic sign and the langue-parole dichotomy. Firth dismisses the langue-parole duality and rejects the code and transfer model of communication model given by Saussure.

3. C. K. OGDEN & I. A. RICHARDS

Ogden & Richards criticize Saussure because the process of interpretation is included in his definition of the linguistic sign, but they do not attack the inexplicability of what Saussure refers to as the internal connection between signifiant and signifié, a notion which contradicts what he refers to elsewhere as the unitary quality of the sign. Recently, Auroux and Delesalle (1990: 123) have countered the criticism of the areferential Saussurean sign, claiming that Saussure deliberately rejected a triadic model of meaning as atypical of the majority of signs. This

suggests that Saussure's dyadic sign may be viewed as a sub-type incorporated by the triadic sign of the Ogden-Richards model. This proves not to be the case, because it undermines the arbitrariness of the Saussurean sign (Gordon 1991).

Ogden & Richards reject Saussure's langue/parole opposition because their distinction between 'sign' and 'symbol' makes it unnecessary. They also dismiss the signification/valeur opposition, in spite of its comparability to the principle formulated by them as the sixth canon of symbolism: "All possible referents together form an order, such that every referent has one place only in that order" (1989: 106). The crucial difference is that this and all of Ogden & Richards' canons of symbolism are grounded in the triadic model of meaning, whereas Saussurean valeur holds among dyadic signs.

4. BRONISLAW MALINOWSKI

Whereas Saussure is criticized by Ogden & Richards, he is largely ignored by Malinowski. This is to be explained by differences of purpose. Ogden & Richards are concerned with establishing an analytical framework for linguistic analysis; Malinowski is concerned with carrying out linguistic analysis. His data are accommodated by the Ogden-Richards triangle reduced to its base line, but incompatible with the Saussurean dyadic sign, and the distinction between langue and parole is irrelevant, in that Malinowski's work is totally data-oriented. Given the increasing emphasis on contextualism which develops from Malinowski through Gardiner to Firth, and the bias in Firth's writings which obscures the origins of that contextualism, it is important to notice that in his early work Malinowski identifies his context of situation with Ogden and Richards' sign-situation.

5. ALAN GARDINER

Context of situation is the thread from Malinowski to Gardiner. Unlike Malinowski, however, Gardiner found it necessary to explicitly reject not only the areferential sign but the Saussurean formulation of the langue/parole opposition and the synchronic/ diachronic dichotomy. Unlike Ogden & Richards, he does not repudiate Saussure entirely but rather modifies langue/parole and synchronic/diachronic in a manner which makes them complementary. His analysis anticipates the incipient empirical pragmatics of J. R. Firth.

6. J. R. FIRTH

Firth's writings suggests that what he rejected was not so much the linguistic phenomena described by the Saussurean oppositions as the excessive rigidity of the oppositions themselves. The basis of Firth's

approach is to analyze meaning at five levels, described in terms of functions: phonetic, lexical, morphological, syntactic, and semantic. Love (1991: 231) notes that the possibility of an exhaustive description of meaning by the five-level analysis cannot be achieved if limits are not imposed on potential constituents at each level. No answer to this conundrum is available from Firth, because it would entail an admission that the starting point of his analysis is indistinguishable from the Saussurean functionalism to which he declared himself to be opposed. In fact, Firth relocates Saussure's notion of meaning as a purely differential phenomenon, determined by a process of exclusion, from *langue* to *parole*. Moreover, the categories Firth established to prevent endless proliferation of meaning are subject to the same criticism he directed at Saussure--that of schematic constructs with no ontological status.

Firth's criticisms of earlier scholarship is not confined to Saussure. Oddly enough, like Morris (1955), he condemns Ogden & Richards on a charge very much like the one they brought against Saussure. Firth overlooks the fact that Ogden & Richards' distinction between sign-situation and symbol-situation obviates what he perceived as misguided orientation in Saussure and that his own protest against the reification of structure in Saussure is an extension of Ogden & Richards' criticism in the same regard.

7. CONCLUSION

Ogden and Richards criticize Saussure on more issues than any other scholar and substitute coherent notions to replace those they reject. Malinowski does not find it necessary to articulate a critique of the *langue-parole* opposition, remaining instead fixed on his objective of articulating ethnographic description. Gardiner provides a coherent argument in favour a revising and combining *langue-parole* and *synchronie-diachronie* and manages to adhere to his own proposals when he moves from theory to practice. Firth, by contrast, simply rejects much of Saussurean doctrine without managing to disentangle himself from a degree of adherence to it. There is, therefore, a full range of positions from incompatibility, with respect to the fundamental definition of the linguistic sign, beginning with Ogden & Richards' to unwilling and unwitting compatibility, with respect to the fundamental concept of linguistic function, in the case of Firth.

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THE HISTORICAL DEVELOPMENT
OF JAPANESE PSYCHOLINGUISTICS

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1. INTRODUCTION

The history of Japanese psycholinguistics, like that of Western psycholinguistics, is a relatively recent one and can be linked to psychological interests in language behavior over this century. Like Western psycholinguistics, the field has been confined largely to the discipline of psychology (See, for example, Haga: 1988), although more recently attempts have been made to incorporate current linguistic theory into research directions (See, for example, Otsu: 1989). This paper attempts to illustrate contemporary Japanese psycholinguistics by citing four main issues in current research, namely, kana/kanji processing, hemispheric specialization and laterality differences, sentence processing, and text processing.

2. KANA AND KANJI PROCESSING

Japanese employs an orthographic system which relies on two kana syllabaries and a large inventory of logographic kanji characters derived from several historical periods of Chinese influence. The received opinion is that the kana syllabaries evoke a phonological recoding in lexical access procedures, while kanji processing accesses semantic values directly in a word-specific strategy based on visual shape. Recent psycholinguistic work has challenged whether such a simple view of kana-kanji processing can be upheld. For example, work with eye-movements in reading Japanese texts calls for a reconsideration of the role of kanji vs. kana in processing text longer than a single word. Kanji-based texts are both easier and faster to read than kana-only texts, as the eye skips from kanji to kanji, using them like stepping stones to organize the text in a top-down processing strategy (Osaka: In press). Work with word recognition for isolated words also suggests that some kana shapes present immediate lexical access; for example, Besner and Hildebrandt

(1987) found that visually familiar words written in katakana were named faster than both non-words and unfamiliar words.

Current Japanese psycholinguistics is quite pre-occupied with the structure of the mental lexicon, and the processes underlying lexical access and word recognition. Kanji have been probed with semantic priming tasks, with the results often supportive of a spreading activation model of lexical access (See Kawaguchi: 1987; Naka: 1984). Sakuma, Ito, and Sasanuma (1989) examined whether kanji characters or word units are the recognition units in lexical access for vocabulary items written in kanji characters, and concluded that word units are the basic elements in the mental lexicon instead of kanji characters or analyzable parts thereof.

3. HEMISPHERIC SPECIALIZATION AND LATERALITY

Kana recognition is typically thought to exhibit a right visual field (and thus left hemisphere) superiority, while kanji recognition exhibits a left visual field (and thus right hemisphere) superiority. But Hatta (1981a, 1981b) has reported differential hemispheric involvement, depending upon the stage of kanji processing, e.g., pattern-matching vs. lexical decision vs. semantic comprehension, as well as differences in processing level and processing strategy. Such findings challenge the received view that kanji recognition automatically invokes right hemisphere superiority.

Recent neurolinguistic work has also challenged this simple view of kana-kanji processing and production. In examining the relationship between localization and symptomatology for over two dozen cases of pure alexia, pure agraphia, and alexia with agraphia, Kawamura (1990) reports that the common sites for lesions causing these impairments are localized in the left parietal or temporal lobes, or the left angular gyrus. The clinical evaluation of symptomatology for aphasics, coupled with the detailed results provided by CT/PET scans and Magnetic Resonance Imaging, show the relationship between the hemispheres to be more complex than has been suggested by neuropsychological tests.

4. SENTENCE PROCESSING

The psycholinguistic study of sentence processing is the one area in Japanese psycholinguistics in which considerable influence from linguistics is evident; this may be exemplified by issues like the role of empty categories in sentence processing and the cognitive consequences of parsing left-branching or right-branching sentence structures. The experimental results with processing empty categories are somewhat equivocal. Mazuka (1991) found no increase in reading times for empty categories postulated as subjects of

temporal adjectival clauses, and concluded that processing empty categories and detecting their antecedent do not impose processing difficulty. In contrast, Yamashita, Stowe, and Nakayama (1991) report the opposite finding when gapped and gapless relative clauses were used as stimuli.

A central theoretical issue in sentence processing involves the psycholinguistic effects of processing left-branching languages (like Japanese), as opposed to processing right-branching languages (like English). It has been generally assumed that left-branching structures are harder to process than right-branching ones, because the verb which provides subcategorizational information appears sentence finally. And Japanese has other grammatical characteristics (free word order, an abundance of empty categories, and an absence of clause-initial complementizers or relative pronouns) which contribute to parsing indeterminacy, the on-line difficulty of knowing where a clause begins. But Japanese subjects parse left-branching Japanese structures just as easily and efficiently as English subjects parse right-branching English structures, and sentence-processing models which postulate right-branching advantages must fail as universal models of sentence-processing (See Mazuka and Lust: 1990).

5. TEXT PROCESSING

Much psycholinguistic research on text processing in Japan has investigated the role of story grammar and its analogues in the comprehension and recall of text. A number of experiments, typically using memory tasks, have convincingly demonstrated that narratives are actually processed in units proposed by models of story grammar (See, for example, Taniguchi and Kawamura: 1986). Psycholinguistic research with origins in educational psychology has been particularly active in elucidating factors which facilitate comprehension and recall. These experimental results have shown that activities which require the processor to respond to a specific goal, such as inserting questions, analogies, and examples, or imposing a summarizing task, definitely enhance the comprehension of expository texts. This in turn facilitates the construction of an appropriate mental model of the text, which in turn facilitates retention and recall (See, for example, Taniguchi: 1988).

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**CHOMSKY'S READINGS OF THE COURS
DE LINGUISTIQUE GÉNÉRALE**

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0. Introductory observations

With a panel discussion especially devoted to celebrating Noam Chomsky's presentation at the 1962 International Congress being held at this Congress, it appears that a close analysis of his comments on Saussure's *Cours*, referred to at the 1962 meeting for the first time would be of interest, not only from an historical point of view.* The circumstances leading to Chomsky's being accorded such a prominent place at the 1962 Congress have been discussed in Koerner (1989:116-117).

1. Chomsky's Readings of Saussure

In his recent, perceptive, analysis of the work of both Bloomfield and Chomsky vis-à-vis Saussure, John Joseph has distinguished various phases in the reception of the *Cours* in the development of Chomsky's own theoretical positions, namely, 'Chomsky the Saussurean' (with reference to Chomsky 1963), 'Chomsky the Anti-Saussurean' (1965-1979), and, in 1986, as a possible 'Neo-Saussurean' (Joseph 1990:67-73), with an interlude during 1962-64 of 'reaching further back' to other non-American sources of inspiration (*ibid.*, 69-71). We shall see in what follows to what extent Joseph's analysis requires modification. It should be stated at the outset that there is hardly a passage of significance that escaped his attention, to the extent that my own discussion has been aided significantly by his circumspection. There is no doubt in my mind that Joseph is right in saying (p.74) that "there is abundant evidence that Chomsky — like Bloomfield, Saussure and probably every other linguist — has read [Saussure and the work of others] according to his agenda." It needs to be seen to what extent these varying interpretations of Saussure's findings are simply ascribable to a regular evolution of Chomsky's theoretical commitments.

To every informed reader of Chomsky's early linguistic work it is obvious that his theoretical thinking developed out of the post-Bloomfieldian milieu in which he was trained, notably the work of writings of the linguists who dominated the theoretical debate during the mid-1940s and the 1950s, namely, Zellig S. Harris (1909-1992), his teacher at the University of Pennsylvania, and Charles F. Hockett (b.1916) at Cornell University (cf. Koerner 1989:122-129, for details). We noted already that Chomsky's writings before 1962 do not contain any reference to Saussure. Yet it appears that fairly early on in his career Chomsky was not entirely satisfied with the manner in which linguistics was practiced and that he disagreed with the an-

* The present text is, owing to the constraints placed by the organizers on section papers, but a fraction of what the actual paper contains. It is not only stripped of all footnotes and of its bibliography but also of the close textual analysis pertinent to such investigation.

timentalist stand of Bloomfield and his followers, probably as a result of other influences he underwent during his student years at Penn, notably the work in philosophy by Nelson Goodman (b.1906), and, more importantly, that of other scholars and scientists during his Harvard years (1951–1955), in fields ranging from linguistics to logic, early computer work used for translation and other purposes, information theory, and neurology (cf. Koerner 1989a:137, for a tentative list).

If the 1962 Congress was an external factor, there were theory-internal ones too. Huybregts & van Riemsdijk, in their interviews (published as Chomsky 1982), distinguished the following phases in the evolution of Chomsky's linguistic theory, each marked by a particular work: 1955 (*LSLT*), 1965 (*Aspects*), 1973 (*Conditions*), and 1981 (*Government & Binding*). In other words, they distinguish four phases: 1955–1964, 1965–1972, 1973–1980, and the period since 1981, phases which they characterized "successive theories" each of them attempting to find "ways of constraining the transformational power" which *LSLT* had unleashed (Chomsky 1982:61). If we ignore the 'pre-Saussurean' phase, we may note an overlap between their periodization and Joseph's presented earlier, although it should be pointed out that the Huybregts & van Riemsdijk periodization was based on Chomsky's syntactic theories rather than his general linguistic views. For his part, Frederick J. Newmeyer, the widely acknowledged historiographer of Chomskyan linguistics in North America, though almost exclusively interested in syntax (but also in the more ideological side of Chomsky's theories), has recently presented the following periodization (Newmeyer 1990:169):

PERIOD	NATURE	YEARS PREDOMINANT	PRINCIPAL INSPIRATION
Early transformational grammar Chomsky (1957)		Rule-oriented	1957–1965
Generative semantics	Principle-oriented	1965–1972	Katz & Postal 1964; Chomsky (1965)
Lexicalism	Rule-oriented	1972–1981	Chomsky (1970)
Principles & parameters	Principle-oriented	1981–	Chomsky (1981)

Newmeyer (p.169) specifies that these are "four distinct periods in the development of the theory of competence, each of which can be characterized in terms of whether rules or principles have formed its principal research focus." We shall see in what follows whether this periodization is paralleled by the varying interpretations Chomsky has offered of selected passages from the *Cours*. So if we exclude the first phase of Chomsky's work, i.e., the years before his first reading of Saussure (1951–1961), we may identify three subsequent periods in Chomsky's theoretical development, each marked by a different attitude towards the *Cours*.

1.1 Phase II: 1962–1972: Frequent references to Saussure's work

Chomsky's 1963 article on "Formal Properties of Grammars" constitutes one of the first references to the *Cours*, since there is no indication in Chomsky's work that he had familiarized himself with Saussurean tenets before 1960. But it is clear from the start that Chomsky's view of language is much more restrictive: syntax is central to his considerations, and so he quickly distances himself from Saussure by stating that his "discussion departs from a strict Saussurian conception in two ways" (p.328), namely, by side-stepping "the semantic side of *langue*" while at the same time reformulating the notion of *langue* so that it becomes "a grammar that generates sentences with structural descriptions; that is to say, [...] the speaker's linguistic intuition, his knowledge of the language" (p.329), something which is quite un-Saussurean indeed. Here as elsewhere not only does Chomsky misread Saussure and

ignoror most of the characteristics of Saussure's eonecept of 'langue' (as Joseph succinctly shows), there is little evidence that he was deeply interested in Saussure's linguistic theory. The competence/performance distinction which Chomsky was soon to advocate was at best an impoverished reinterpretation of Saussure's all-important *langue/parole* distinction for the purpose of propping-up of a theory of *syntax*, not of language and its functioning generally.

The other — and historically more important text — written about the same time is Chomsky's plenary paper at the International Congress of Linguists in late August 1962. There the external situation is quite different: Chomsky has for the first time in his career the opportunity to present his ideas in front of an international audience (whereas in the 1963 paper he was addressing a much more specialized readership), and so it is not astonishing that he should signal his differences vis-à-vis the *Cours* somewhat more forcefully. For instance, he presents his own ideas first and then draws parallels between his and Saussure's or, rather, refers to the authority of Saussure to lend support to his own position. After having interpreted Saussure's concept of 'langue' as "basically a store of signs with their grammatical properties" — an interpretation he was to repeat on various subsequent occasions, criticizes him for not having provided a "place in his scheme for 'rule-governed creativity' of the kind involved in the everyday use of language". So while Saussure (and his intellectual predecessor, William Dwight Whitney) are chastized for their allegedly static views of language, Wilhelm von Humboldt's concept of 'Form' is presented as akin to his own view because of Humboldt's appreciation of "the 'creative' aspect of language" and the generative processes involved (Chomsky 1964:23) — note that Chomsky refers to the term 'creative' in single quotation marks, here and elsewhere. This understanding for Humboldt's ideas of language must have struck a positive chord in his audience, since, as Joseph, comparing the preprint text of 1962 with the 1964 publication, has noted (1990:69-70), the discussion of Humboldt's views were considerably expanded in the various subsequent published versions of the paper (e.g., Chomsky 1964:17-25 passim). By contrast, Chomsky's characterizes Saussure's concept of *langue* 'as a storehouse of words' on almost every occasion that it is mentioned. It seems to have become the *leitmotif* of his *Methodenklage* directed against the German linguist. No attempt is made to present any of the other, equally important, definitions that Saussure has given to this concept central to his entire theory, such as 'langue' as a social, supra-individual entity shared by all speakers of the language, its mental reality, and as consisting of a system and of rules (cf. *Cours*, p.43).

1.2 Phase III: 1973-1983: Rare references to Saussure

During the period characterized by Newmeyer as the 'rule-oriented' lexicalism phase in the evolution of Chomsky's theory, it seems that he was preoccupied with defending particulars internal to his theory. It was also the period during which Chomsky's European audience had dropped off considerably. (In Germany, which may be taken as representative of European linguistics of the time, transformational-generative grammar enjoyed its largest following in the years between 1966 and 1974, the first and the ninth annual *Linguistisches Kolloquium*.) These internal and external factors may help explain why we hardly find a reference to Saussure in Chomsky's writings of the period. Typically, such references to the *Cours* are more likely to be prompted by others, such as by Mitsou Ronat in her interviews with Chomsky (cf. Chomsky 1979:50-51, 97-98 [where only the interviewer speaks of Saussure's *langue* explicitly]). In those held with Huybrechts & van Riemsdijk (Chomsky 1982), I found not a single reference to Saussure (or Humboldt, for that matter). The last-mentioned interviewers, it should be added, while Europeans, represent a new generation of linguists who followed Chomsky's Pisa Lectures of 1979, which in their published form of 1981 — *Lectures on Government and Binding* —

sparked considerable debate and produced a new framework for doing syntax. This new generation of linguists is largely oblivious to long-standing traditions, but also to earlier, now 'classic' statements of theory by Chomsky himself. As they indicate in their preface to Chomsky (1982:2), Huybregts & van Riemsdijk endorse Newmeyer's (1980) history of American linguistics fully, which entails that linguistics before Chomsky was not yet a science. Hence no need to care about 'pre-scientific' linguists, it appears. So rather than find Chomsky criticizing Saussure, which, as we have seen usually means attacking a particular remark found in the *Cours*, we find Saussure simply ignored.

1.3 Phase IV: 1984– : Renewed interest in Saussure?

By the Orwellian year 1984, Chomsky is past the age of 55, and he appears — if we ignore his engagement in debates focussed largely on U.S. foreign policy attitudes and decisions, which at least since the mid-1970s has outstripped his linguistic output — to have become more conscious of his place in the annals of linguistic science. And more philosophical too, if we note that in what appears to have been his attempt at a synthesis of his linguistic thinking, his 300-page book *Knowledge of Language* (1986), the bulk is taken up by chapter 3 entitled "Facing Plato's problem" (pp.51-220!), which he circumscribes in the Preface (p.xxvii) as his struggle with an attempt "to explain how we know so much, given that the evidence available to us is so sparse". In his 1986 book, Saussurean 'langue' is "far too narrow" because it does not explicitly provide for the possibility of such creativity, nor indeed for the sentence (p.19) and while Chomsky at least now credits Saussure with the characterization of *langue* as an underlying system rather than as a set ('storehouse') of elements as he did during the 1960s, he criticizes him for taking *langue* to be a social product, necessitating a fictitious idealized speech community and preventing it from capturing 'the sociopolitical and normative-teleological aspects' of E-language, whatever Chomsky means by this since we nowhere find him attempting anything like himself. No effort is made, either, to grasp the intent of Saussure's detailed discussion of syntagmatics (*Cours*, 172-174, 176-177, and elsewhere), and his reasons for regarding the sentence as a 'fait de parole'.

2. Concluding remarks

Given the analysis, the result of our investigation is predictable, namely, that Chomsky's attitude toward Saussure and certain of his ideas — note that we never see an attempt on Chomsky's part to analyze Saussure's theory of language in general but to pick out more or less isolated remarks that suit his purposes — shifts with the context, e.g., whether a serious scholarly argument is intended or whether an audience is to be persuaded of the superiority of his views, and tends to change or, rather, fluctuate with the evolution of his theories. At the same time, we should understand that the maturing — and success — of Chomsky's views and his achievement not only of prominence but indeed world-wide preeminence in the linguistic profession may account for a more generous attitude toward Saussure. But as Joseph's analyses (1990:63-65) suggest, his interpretation of and comments on selected aspects of Saussure's theory have remained essentially what they had been more than 20 years earlier, i.e., out-of-context citations for critical, if not polemical, purposes. If a summary of his changing attitudes to Saussure was required, we may distinguish the following periods in Chomsky's scientific *Lebenslauf*:

- | | |
|---------------------------------|-----------------------------------|
| I. 1951–1961: non-Saussurean; | II. 1962–1972: mildly Saussurean; |
| III. 1973–1982: non-Saussurean; | IV. 1984– : mildly Saussurean. |

However, given Chomsky's most recent 'minimalist' pronouncements which may be regarded as a culmination point of his progressive dismantling of the theoretical edifice he has built and rebuilt over the years, only he knows whether there's anything left to say about Saussure's *Cours*.

THE DIRECTORY OF LINGUISTS: A SOURCEBOOK FOR THE HISTORIOGRAPHY OF LINGUISTICS

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It all began in 1988 when the author of this paper set out on an enterprise which since then moved through several stages and will, hopefully, reach its final stage four years later: By the end of 1992, what started as a list of names and addresses will finally be transformed into a two-volume book of some thousand pages. The title of the book is *Linguisten-Handbuch* (let us refer to it here as '*Directory of linguists*'), its subtitle: *Biographien, Bibliographien und Photographien deutschsprachiger Sprachwissenschaftler und Sprachwissenschaftlerinnen*.

1. PERSONS INCLUDED IN THE DIRECTORY

It will be noticed that the persons whose data are included in the *Directory* are referred to by two terms: *Linguisten* on the one hand, *Sprachwissenschaftler(innen)* on the other. What originally was only meant to serve as stylistic variation of synonyms, turned out to be of some use for those of our colleagues who still adhere to a distinction made by some German scholars in the seventies: *Linguist* could then mean 'one who adopts the assumptions and methods of so-called modern (structural, generative) linguistics', whereas *Sprachwissenschaftler* was used either rather contemptuously in the sense of 'one who still follows the old way of doing German-style linguistics' or haughtily in the sense of 'one who does not surrender to the errors and restrictions connected with modern linguistics'. The *Directory* is open to all *Linguisten* and *Sprachwissenschaftler*. So when I prepared the address list I included all persons who work in the field of the language sciences or have close connections with it (particularly scholars whose main interests lie in the field of language teaching). In addition one more requirement had to be fulfilled in order to qualify as a linguist in the sense of the *Directory*: A person asked to fill out the questionnaire had to be either a member of an academic institution in the rank of a professor or he had to have the formal qualifications to reach such a position (that is to say he was expected to have passed the *Habilitation* or an equivalent examination, Ph. D. for instance). Now, if someone isn't a professor or has not passed a higher examination, it need not be his fault. So there is a third way to qualify as a working linguist - by work: Persons who have written at least two linguistic books or have otherwise contributed to our field by publishing more than just a few articles were also asked to send their data for the *Directory*.

Another term needs some explication - *deutschsprachig*. By *German-speaking* we mean quite different things. First of all, naturally, 'one who speaks German (as his mother tongue) and teaches or publishes in this lan-

guage'. But we also mean, 'one who works at an academic institution in a German-speaking country, teaching or publishing in some other language'. And thirdly it is taken to mean, 'one who teaches, or publishes on, the German language in whatever language he prefers'. This is why contributors to the *Directory* live in all continents, not only in the German-speaking countries of Central Europe.

2. INFORMATION INCLUDED IN THE DIRECTORY

As the subtitle of the *Directory* indicates the entry of each contributor consists of three parts. First there is a photograph of the contributor. About ninety percent of our colleagues agreed to have their portrait printed. So the *Directory of linguists* is to my knowledge the first book in our field which offers the user a chance to picture his colleagues to himself.

The second part of an entry consists of biographical information, with the following data presented in the head: birthday, birthplace, institutional and private addresses. Information about education follows: Where and when did the contributor study which subjects? Which higher examinations did he pass, who was the supervisor of his doctoral or other thesis? The third biographical section concerns the contributor's academic career and describes his current and former positions. The fourth section contains information about the contributor's membership in professional societies, about his activities in scientific and academic institutions, in the organization of linguistic meetings, and about honours conferred on him, if any.

These strictly biographical informations are followed by bibliographical data with a linking section in between. Here the contributor's main fields of linguistic interest are enumerated together with an indication of the language or languages he works on.

The third part of the entry is bibliographical. First of all the contributor has the opportunity to cite all monographs and other books he has written. It was our aim to provide as exact and complete bibliographical details as possible: co-authors (full names), full title, place and name of the publisher, year of publication. This also applies to the second section, where articles in journals and anthologies are listed. Authors were asked not to cite more than about 20 articles in detail and to merely summarize the other ones. The following sections give, if the contributor so wishes, complete information on the volumes edited, the book series and journals edited, the books translated and the Festschriften dedicated to him. There is a section 'Varia', too, where the titles of school-books, of editions of books by other authors etc. can appear.

3. SOURCES AND SCOPE OF THE DIRECTORY

When in 1988 I started to prepare lists of names and addresses there was no difficulty to obtain these data for persons living in that part of the world we then called the West. Main sources were for West Germany Kürschners *Deutscher Gelehrten-Kalender* (1987 edition - the identity of names is purely accidental) and for several other countries the *Directories of Germanists* prepared by the German Academic Exchange Service (DAAD). Member lists of scientific societies such as the Societas Linguistica Europaea were of great value, too. They permitted access to countries that were under communist power then. By asking colleagues from these countries to provide lists with the names of scholars who should be included, completeness, at least near-completeness could be achieved for countries such as Poland and Hungary.

The most severe problems were encountered in connection with the German Democratic Republic. At that time there was only one list with names and addresses of East German colleagues available, namely the list of participants of the predecessor of the present congress, the 14th Congress of Linguists in East Berlin in 1987. But, alas, when we sent out the questionnaire in May 1989 only a few were returned. It turned out later that colleagues working at universities and pedagogical institutes were not allowed to fill in the questionnaire, many of them never even got my letter which was withheld by the leading authorities of their universities. Only linguists working at the Academy of Sciences in East Berlin could send me their questionnaires - the Academy was not subject to the Ministry of University Affairs or the Ministry of People's Education, but was under direct control of the East German government. But even they were forbidden to reveal their telephone numbers, details of their academic careers and, curiously enough, they were forbidden to fill in column 32 of the questionnaire, 'Diverse'.

The situation changed dramatically in November 1989, when the frontiers between East and West Germany were broken down. Now almost all of the scholars whose names and addresses had been found in the 14th Congress list sent me their data. After some time directories of people working at academic institutions appeared and provided new names and addresses. In this way the number of contributors increased by some 100 persons.

The last directory that led to a quantitative increase was the list of members of the International Association of Germanists (IVG), published on the occasion of the society's congress in Tokyo in 1990. The exploitation of this list made the *Directory* really international so that now linguists from all over the world appear in it.

It is difficult to indicate precisely the number of countries contributors come from. In 1991 the Soviet Union dissolved so that now we have to distinguish between colleagues from Russia, Ukraine, Estonia, Lithuania, Latvia, to name just a few. And at the time of the preparation of this paper (summer 1992), we cannot be sure into how many countries former Yugoslavia will split up and it seems as if Czechoslovakia will not remain one state. These political changes are of no linguistic interest proper - but they are important for us since they indicate the changes in the policy of freedom of information in the last few years. They enabled our colleagues to lay open facts about life and work to an extent we could only dream of at the time of our last congress.

However, not all of the scholars asked to supply their data saw themselves in a position to do so. Questionnaires were sent out to about 2,000 persons, but only three quarters of them are included in the *Directory*. Granted that in several cases contrary to our assumption the addressee was not a linguist and did therefore not reply, there are quite a few colleagues who implicitly or explicitly denied to appear in the *Directory*, some of them referring to their right of informational self-determination.

4. STATISTICS

More than 1,500 scholars submitted their questionnaires. Their data appear in the *Directory* in a somewhat unified form. Most of them are from Germany, the relation between former West and former East Germany being 4 to 1. The second largest group consists of colleagues from the other German-speaking countries, Austria and Switzerland. Next come linguists from the other European countries, from the United States and from Canada (10). Japanese and Chinese linguists form large groups, too, but there are also countries (like Thailand) represented by one person only.

About 15 percent of the contributors are women. The percentage of women increases when we take into account the younger generation under 40.

The information supplied in the *Directory* can be analyzed and evaluated in several respects. By taking, for instance, into account the places where contributors went to university or college, where they graduated, where they worked in former times and where they work now, one could determine the extent of mobility of linguists. In addition, one can ask if this mobility rate differs from country to country. It seems as if it was rather low in East Germany where, compared with West Germany, more scholars studied, graduated and continuously worked at one and the same institution.

One could, secondly, determine the 'productivity' of a scholar with respect to the number of doctoral and other theses he supervised. You only have to go through the entries of the *Directory* and note the names of the supervisors - there is no category 'theses supervised'. But this procedure is very tiresome - and it is unreliable. It is unreliable because not all of the contributors in fact give the names of their supervisors. This brings us to one of the limitations of the *Directory*: Only those informations are included that the contributors volunteered to give us. In no case anything was added without the consent of the person concerned. The technical problem of finding out the supervision rate of a contributor, on the other hand, is, with the existence of computers, no real problem: If data are put into a data bank, it is quite easy to list all persons reported to have acted as supervisors and to combine their names with the names of all of the contributors with theses supervised by them.

A data bank would be indispensable too, if someone tried to analyze the information stored in the bibliographies. In principle it is possible to get a relatively reliable picture of the state of the art of linguistics at the end of the century, as far as German-speaking linguists are concerned. One can put together information on which linguistic fields are worked in, which languages are explored, which fields outside of linguistics proper are taken into account by people who consider themselves linguists. Such a content analysis could be done on a rather solid base, since the data of the *Directory* are more comprehensive than the information collected in bibliographies such as the *Bibliographie linguistique*. The restrictions found there - concentration on linguistics proper with the exclusion of e. g. language teaching, exclusion of certain periodicals etc. - do not apply to the *Directory*, where contributors are free to mention all kinds of published work. No such content analysis could be prepared for the current edition of the *Directory*. But there is an index of the fields of contributors' main interest, combined with the languages they work on.

Talking of restrictions of the *Directory*, we have to face the fact that we cannot be sure that all people falling under the aforementioned criteria for inclusion were put on our lists and asked to contribute to the *Directory*. Rather, we can be sure that this is not the case. So we will ask all German-speaking linguists who come across the *Directory* and don't find their name in it to inform the editor. He will be glad to invite them to send in their questionnaire if some day the second edition of the *Directory* is prepared.

THE PETITES-ÉCOLES AND THE GRAMMAIRE GÉNÉRALE ET RAISONNÉE

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In France as well as throughout most of Europe in the years leading to the establishment of the Port-Royal community, political and religious conflict were the norm. In this milieu the Jesuits played a central role. They had worked their way into many positions of power so that they were respected and/or feared by almost everyone. Also they set up a system of education equaled by none to that date. The Jesuit role in the history of Port-Royal and the Grammaire générale et raisonnée (GGR) is an extremely important one. The Jansenists' religious conservatism (yet reform-minded,) though not a serious threat to the Jesuits was at least a source of irritation and embarrassment. Politically the Jesuits were a significant power behind the throne of France and consequently they engaged in polemics with and caused trouble for the community at Port-Royal and vice-versa. Of course the mismatch in size and power of the two groups precluded any doubt as to the final outcome.

One source of conflict between the Jesuit and Port-Royal education, was the Jesuit emphasis on the study of grammar as the basis for all education. The Jesuits liked classical literature and were tolerant towards ancient civilizations; while protestant reformers and the Jansenists had a rather severe view of divine grace. They believed that without the assistance of God, man was basically corrupt and totally incapable of doing good works as a result of the fall in the Garden of Eden. The Jesuits saw no conflict of principles in finding virtue in Greek or Roman literature and philosophy. "So, interpret pagan authors so as to make of them heralds of Christ." (Schwickerath 1904:365)

The GGR and other works on language at Port-Royal clearly had pedagogical objectives thus the conflict between the "petites-écoles" and the Jesuits. The petites-écoles though microscopic compared to the Jesuit system, were influential during their short existence. Given the enmity that existed between the Jesuits and the Port-Royal, the destruction of the petites-écoles was inevitable. Yet the fame of the schools was a salient factor in the success of the GGR. However the writings of the GGR and other works on language at Port-Royal was more than pedagogical. The Jansenist philosophy of education was intertwined with their religious beliefs and both were very different from the Jesuit system. The basis of all Jesuit education was the Ratio Studiorum (plan of studies) drawn up in the years before 1599. The Ratio Studiorum was a master plan based on the results of several years in the earliest Jesuit colleges. This was a centralized system of education. Although excessively autocratic, it fit the times. The chaos of previous years had created the desire among the

upper classes throughout Europe for uniformity and discipline in all aspects of social life including education.

It would be tempting to equate Jansenism with Port-Royal. Although Cornelius Jansen did indeed have strong opinions, one should not attribute all his beliefs to anyone Jansenist because one of the most characteristic features of the Port-Royal community, though united, was its members were not part of any organized religious group. What earned Port-Royal fame was the political consequences resulting from the expression of Jansenist beliefs and the educational philosophy of the community. It is this Jansenist philosophical belief that unifies the Port-Royal works on language. Of interest is the Jansenist emphasis of the individual so that personal beliefs were to take precedence over those of the church or state. This involved a reliance on reasoning and judgment. As St. Augustine had expressed, reason may be a tool in propounding and defending religious faith. Thus the Jansenist ideal was a Christian who knew the religious tenets and could reason them out. This view rather than undermining faith, this ability to evaluate and judge intelligently would serve to demonstrate the boundaries between the knowable that was the dominion of man, and the unknowable that was that of God. This fit neatly with the rationalist philosophy of the times and thus played an important role in the philosophy of education of the petites-écoles. These schools only lasted 22 years but their influence was immeasurable. The idea for the petites-écoles was the Abbé de Saint-Cyran. His plan was for a school that would provide a traditional education with Jansenist Port-Royal philosophy. Sainte-Beuve claimed that Port-Royal adopted the name so that it would be clear, that they did not intend to compete with the University. (1840:419) This supposedly modest name was an attempt to keep a low profile both in regard to the University of Paris, as well as the Jesuits (Carré 1887:v) But the Port-Royal schools were not elementary ones. They offered such complete education that the students found the University curriculum redundant.(1840:426)

The important events of the petites-écoles are as follows: a) 1638, Saint Cyran, having assumed the responsibility for the education of several boys the previous year, organizes them into the beginnings of the schools and locates them in Paris next to the nuns of Port-Royal. b) 1639 Saint-Cyran is arrested and the students are transferred to Port-Royal des Champs, 25 kilometers from Paris, where the original site of the nunnery was. c) 1646 the schools are moved to rue Saint-Dominique in Paris when the nuns reclaim Port-Royal des Champs because of overcrowding. d) In the late 1640's rumors about the schools begin to circulate as their reputation grows and the Jesuits instigate an inquiry. A government official finds nothing unusual but to avoid further conflict the Port-Royalists close the school in Paris and distribute the students in three places in the outskirts of Paris in 1650 and during the next six years the schools reach their highest potential (1887:iii). e) 1656 the renewed controversy over Jansenism leads to successful attempts by Jesuits to close the schools. A few students remain and f) in 1661 the schools are forced to close permanently.

To understand the petites-écoles one must understand the views held at Port-Royal concerning children. The key was man's fall from grace as a result of original sin. One's good nature was ruined by the Fall. Saint-Cyran believed that the devil possessed even the soul of an infant in its mother's womb (Fontaine 1696:33). However, through baptism the innocence that existed before the Fall is restored but the situation is still precarious subject to all sorts of temptations. One's corrupt nature makes one an easy prey but absolution is possible with divine grace, something that one cannot depend on, since God does not grant it to everyone (*ibid:XVI*). The best situation, then, is to take no chance and lead a sinless life. But children are defenseless against temptations,

so adults should fight their battles. Educators must "enlighten their clouded reasoning, and redress and strengthen their perverted will" (*eclairer leur raison obscurcie, redresser et fortifier leur volonté pervertie*) (ibid.). This is the difficult goal of education. This goes back to the philosophy of St. Augustine and Neo-Platonism. Teachers, in fact, do not "teach" anything; they merely attempt to lead the students to what they know. Success depends entirely upon God and divine illumination within. There are so many obstacles for an impressionable child that the teachers must constantly watch over him and keep him from sin. The student helps himself by the ability to think clearly and properly.

The parents most important obligation was to give their children a proper education and failure of this duty was enough to cause their damnation (Lancelot 1738:II, 331). Being an educator and having the students' souls in one's hands was the noblest profession in the eyes of God and church (Fontaine 1696:43). However, in spite of the educator's efforts, in the final analysis "grace" alone can change hearts. One might say that the Port-Royal view of children was at the same time depressingly bleak and loving. They were partly victims and partly responsible for their miserable condition because of original sin. They were as helpless as sheep, but had the capacity to turn on each other as wolves. The emphasis was on religion rather than general education. But, Port-Royal tried to combine what they considered necessary elements of a complete education namely piety, belles-lettres, and manners or civility. The fundamental method of achieving this was to stress judgment and the GGR entered the scene as a part of the Port-Royal plan to develop clear thinking. In some way it was a companion piece to the Logique by Arnauld and Nicole. Judgment was the most important faculty and education had to be aimed at developing judgment as well as exercising the mind and memory (Coustel 1687:150). The best way to achieve this was by giving students complete freedom to ask questions and to inquire about matters they did not understand. Thus the master was obligated to challenge the quiet students, ask about the sense of what they had read, how they would respond to particular situations, and how they would resolve a certain problem. Nicole, in his *Traité de l'éducation d'un prince*, realized that not all students were equal in judgment. Some may have a strong memory but display weak judgment; others may be the opposite. This philosophy, based on Cartesian principles, was the heart and soul of the "new method" developed at Port-Royal. One should find the quickest, easiest methods for teaching, and learning should be enjoyable. Lancelot certainly had this in mind when he devised his "*nouvelle méthode*" for learning languages. This led to an emphasis on developing successful methods through practice rather than theory. The educators of Port-Royal tested the methods they developed for many years. The writings were published after the *petites-écoles* were closed in 1661. An exception to this were GGR, the Logique and the grammatical works of Lancelot. An excerpt in Carré from an unspecified work by Guyot, a little-known master says: "The teachers must keep in mind that if something is difficult to explain, the children are having incomparably more difficulty learning it: this should be a motive for them to be kinder and more patient towards the students and to make them more sympathetic to the weaknesses of youth. For teachers must not imagine that what they now know with pleasure, the students can learn without difficulty; ... I cannot share the opinion of those who wish their pupils to become wise only through suffering and work, and who, instead of comporting them, allow them to be crushed under the weight of a thousand useless difficulties ... one should render studying even more agreeable than games and other amusements. There will always be enough other problems, either from their natural tendencies or aversions, without our adding even more with our bad methods of teaching" (Carre 1887:82).

To the Port-Royal schools, with their carefully chosen students, education meant more than providing the tools for economic success. The stress was on the development of character and the cultivation of Christian virtues. Thus the study of language and literature was essential for a deeper understanding of Christianity and the ability to defend the faith. A mastery of language at the time meant knowledge of Latin. But since French had asserted itself as an educated language in the previous hundred years, the Port-Royalists adopted the method of second language acquisition. First cultivate the native language. The goal was to remember useful and elegant passages for effective expression rather than an exercise in memory. Better comprehension was achieved by discussing the relevant factors and digression was not avoided.

It is clear that the GGR was simply a teaching grammar for the use of the students of the Port-Royal community. Lancelot wrote only pedagogical works and the GGR was entirely his production and was intended to serve as a sort of philosophical guide that would facilitate the study of individual languages. Lancelot and Arnauld attempted to find principles of language that would be independent of time and space. Examination of different language would reveal the principles languages have in common. By explaining these common principles one would shed light on the universal characteristics of language. The student, equipped with an adequate understanding of these universal principles and their relationship to universal thought processes, would be better prepared to confront the task of mastering Latin as well as any other language. This would fulfill the educational goals of Port-Royal schools whose key term was judgment. The ability to exercise proper judgment was education, and education meant a highly developed proficiency in literary skills, particularly grammar. Skill in both French and Latin gave students better access to all didactic materials and thus promoted the values required of a good citizen and a good Christian. In a sense the study of grammar at Port-Royal was still fulfilling the role that it did for over a millennium as the foundation of the trivium grammar, rhetoric and dialectic, but whereas this had traditionally involved the prescriptivist study of Donatus and Priscian, now it was supplanted by a method of achieving an understanding of what language was and how it worked in order to "do through knowledge what others do only by custom" (GGR preface). This indeed was Lancelot's goal.

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'ROMANTIC' IDEAS ABOUT THE GERUND

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1. INTRODUCTION

In 1912, an article by Curme on the origin of the English gerund appears: "History of the English Gerund". It causes a great deal of debate¹. The debate focuses on whether a verbal gerund exists in Old English or whether it, due to Latin and French influence, first appears in Middle English. One of Curme's main points is that French did not influence English syntax and that gerunds appear on their own because of 'tendencies' present in the language, not through imitation. Another of his claims is that constructions in English are powerful and versatile whereas constructions in German are not. This paper is not a study of the gerund *per se* but rather an inquiry into the prevailing attitudes towards language revealed in discussions about gerunds by several linguists of the first half of this century, a period often seen as already structuralist.

The early twentieth century is generally seen as influenced by de Saussure (from ±1916 onwards) and later by Bloomfield (from ±1933 onwards) and most histories of linguistics mention Curme, Einenkel and Jespersen either only in that context or not at all². The 'political' aspect is not mentioned and yet the nationalist uses of language were a central feature of work in the early part of the twentieth century, as an outline of the framework in which gerunds are discussed quickly makes evident. The English gerund was perhaps an 'ideal' construction to discuss because its origin and analysis are not clear: is it native to English or borrowed; what is the relationship with the present participle; is it nominal, verbal or adjectival? In its present form, it is also unique to English.

2. 'ROMANTIC' IDEAS

During the last part of the 18th and early part of the 19th century, the Romantic movement is at its height. It, however, survives until much later. The uniqueness of each language and each people comes to be admired and the relationship between a people and its language is stressed. In 1853, J. Grimm talks about the courage that is needed to change consonants: "liegt nicht ein gewisser mut und stolz darin, media in

tenuis, tenuis in aspirata zu verstärken?". In 1850, Schleicher argues that there exists a direct relationship between the history and the language: the richer a people's history is the less advanced its language. Related to this is the idea that languages can be ranked (in Schlegel, Schleicher and Humboldt).

3. THE EARLY TWENTIETH CENTURY

3.1. Language and People

As mentioned, histories of linguistics pay attention to the early 20th century as a time when de Saussure (from 1916 on) and Bloomfield (from 1933 on) influenced the field. However, for linguists of that era such as Curme, Jespersen and Sapir, the relationship between a language and its people plays an important role. In 1935, Curme writes: "[i]n the modern period the English people has shown its love of activity not only by establishing empires all over the world but also by creating new forms of the verb so that it can talk about the things it is conceiving and doing". The gerund is one of those new forms of the verb. Undoubtedly, changes in vocabulary come about because of external changes, but it is strange to see this argued for syntactic changes as well.

Curme also seems to assume that once a people have a language they are stuck with it and as such there exists an influence by language on thought. The gerund "makes possible a finer shading of thought and feeling" (1912: 361). The gerund "can express much finer shades of thought than the infinitive" (1912: 380). The chronologically later Sapir-Whorf Hypothesis (or the theory of linguistic relativity that has come to be so known) is compatible with these ideas. It is very behaviorist in that the environment/language determines how an individual thinks. Finer shades of thought are only possible in languages possessing the gerund. What the 'real world' looks like depends very much on the language a person speaks.

A 'nationalist' flavor is also present in Curme's insistence that "French influence upon English syntax has been greatly overestimated" (1912: 377). The history of the gerund shows "only the natural display of pure English forces and we cannot discover any foren forces that hav permanently affected English at this point" (1914: 496, original spelling is retained). When challenged, Curme writes "[t]he riter can only anser that he does not feel these foren forces at all" (1914: 496, emphasis added).

Jespersen (1938: 1ff) finds that language and people have a "mutual bearing on each other" and that English is "positively and expressly masculine", the sound system "clear-cut" as opposed to other languages: "You do not expect much vigour or energy in a people speaking such a language: it seems adapted only to inhabitants of sunny regions where the soil requires hardly any labour".

3.2. Ranking and Tendencies

Ranking languages is done through ranking constructions: for Curme, the gerund is "vigorous", "terse", "forceful" (1912: 349), "accurate" and "elegant" (1912: 374); the tensed clause in German that corresponds

to the gerund is judged to be "clumsy". Jespersen finds that the gerund has "become a most valuable means of expressing tersely and neatly relations that must else have been indicated by clumsy dependent clauses" (1938: 186).

'Tendencies' play a central role in relating a people to its language. They are adopted so as to emphasize the role of a people in language change, to be able to exclude foreign influence on language development and to make it possible to pronounce value-judgements. Tendencies are important for emphasizing (and ranking) the unique nature of a particular language, in this case English.

There are several changes Curme discusses as caused by "forces", "inner development" or tendencies (1912: 363; 371). For instance, the verbal noun possesses verbal force, the compounds tend to dissolve and infinitives are weak. The gerund was a noun originally according to Curme but the verbal force was present. The evidence he presents is very weak. Compounds such as *circsoen* ('attending church') dissolve because of "many forces". These forces included "[t]he English fancy [which] busied itself a good deal with this mysterious stem" (1912: 356). When talking about the difference between present participles and gerunds Curme's criteria are determined by productivity. When a form in *-ing* is productive, it is a gerund; otherwise a present participle. If the gerund expands its verbal functions, one may expect other constructions to lose ground. This is indeed the case with the infinitive. The reason the infinitive lost ground was because it came to be preceded by *to*, which "was fatal to further development of this form" (1912: 375). It was fatal since *to* hindered the use of an infinitive with another preposition: *wythur to make any noyse* is "clumsy" (1912: 377).

Tendencies explain very little and the arguments in favor of them are weak but they make it possible to talk about the unique character of a language. They are also the means to change a language.

4. CONCLUSION

In discussing language change, people make 'tendencies' carry an explanatory burden, even though there is little evidence. Gerunds thus assume a 'political' role because tendencies allow one (a) to ignore possible foreign influence, (b) to assume strengths in one language but not in another, and (c) to ascribe 'strengths' in a language to strengths in a people. The debate between Curme on the one hand and Einenkel and van der Gaaf on the other focuses on (a). Curme's critics show that the gerund is not a verb in Old English. If the latter is true, Latin and French could have influenced the development of the gerund, thereby destroying Curme's claim. Positions (b) and (c) are not criticized and one can therefore assume that a non-descriptive approach to language was common. Many other assumptions are implicit and are ignored by his critics, e.g. that expansion of one construction over another construction shows strength and forcefulness and that this is desirable.

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NOTES

1. For instance, Einenkel (1913; 1914), Curme (1914; 1916) and van der Gaaf (1928).
2. Robins (1967) mentions Jespersen in the context of working on synchronic as well as diachronic aspects but does not mention Curme; Harris and Taylor (1989) mention neither; Waterman (1963) mentions Jespersen's analysis of the Great Vowel Shift; in Sebeok (1975), Jespersen is cited but is not dealt with in his own right and Curme is not mentioned.

SECTION 16

**MÉTHODOLOGIE
(OBSERVATIONS DE DONNÉES, CONSTITUTION ET
TRAITEMENT DE CORPUS, EXPÉRIMENTATION, ETC.)**

**METHODOLOGY
(DATA COLLECTIONS, ESTABLISHEMENT AND
PROCESSING OF CORPUS, EXPERIMENTATION, ETC.)**

**POUR LE DÉVELOPPEMENT DES COMPÉTENCES
DE PRODUCTION DU TEXTE EXPLICATIF**

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1. INTRODUCTION

Paradoxalement, bien que le texte explicatif (désormais TE) soit omniprésent à l'école, il n'a été que récemment promus au statut d'objet d'enseignement. Par contre, l'appréciation des professeurs sur les TE produits par leurs élèves - et parfois même, celle des professeurs de langue - rend compte des difficultés présentées par les étudiants lorsqu'ils doivent expliquer un phénomène quelconque. Des données empiriques démontrent que les difficultés sont encore plus nombreuses si, pour l'explication, ils doivent mettre en rapport certains concepts, procéder à des opérations de généralisation et transfert et, surtout, s'exprimer en langage écrit. Dans ce cas-là, il est probable que le texte présente des problèmes du point de vue cognitif (l'élaboration de la proposition explicative), macro et microstructurel ou même d'insertion au contexte pragmatique.

Toutes ces données ont soulevé quelques interrogations: Les difficultés de production du TE se doivent-elles à l'action pédagogique du professeur? Au niveau de complexité des opérations mentales effectuées pour construire l'explication? À l'extériorisation verbale des connaissances élaborées (planification, mise en texte, révision)? À des questions d'ordre pragmatique?

Une analyse préliminaire des compétences (psychologique, linguistique et discursive) inhérentes à la production du TE a fait supposer que c'est l'interaction de tous ces facteurs qui est à l'origine du problème, et qu'il faut s'en tenir compte, si l'on a l'intention de proposer une modalité d'action pédagogique dirigée vers la production des textes explicatifs.

2. LA RECHERCHE

L'objectif de la recherche a été de proposer, analyser et valider une modalité d'action pédagogique dirigée vers le développement des compétences de produc-

tion du TE, en vue de permettre à l'étudiant: a) d'atteindre un niveau plus élevé de précision et clarté; b) d'atteindre un niveau plus élevé de généralisation et transfert; c) de manifester des indicateurs d'attention, réceptivité et intérêt (prédisposition).

On est parti de l'hypothèse que le développement des compétences de production du TE était étroitement lié à un travail construit sur l'intersection des aspects épistémologiques, psychopédagogiques, psycholinguistiques, textuels, discursifs et linguistiques.

2.1. Bases théoriques

POPPER (1979) a soutenu, épistémologiquement le cours sur le TE qu'on a proposé comme expérimentation. Dans les théories cognitivistes, spécialement chez PIAGET (1977) et BRUNER (1972 - 1976), on en a cherché les principes psychopédagogiques. Les points de repère pour l'approche psycholinguistique, on les a retrouvés chez VIGOTSKY (1979) et LURIA (1987), notamment en ce qui concerne les opérations avec des concepts et le passage du discours intérieur au discours extérieur. Les articles sur le TE, publiés dans la revue Pratiques, ont orienté les études d'ordre textuel. Les aspects discursifs ont été analysés d'après CHARAUDEAU (1983).

2.2. L'expérimentation

Des étudiants du Premier Cycle d'Études Supérieures de l'Université de Caxias do Sul, fréquentant les classes de Portugais, ont constitué un groupe de contrôle (GC) et un groupe expérimental (GE) - celui-ci ayant suivi le cours sur le TE qu'on a proposé comme expérimentation.

Pour constituer le corpus, on a demandé aux élèves (au début et à la fin du cours) de produire deux textes: 1) une explication d'un phénomène écologique (l'invasion des "caturritas" (1) dans certaines régions cultivées du Rio Grande do Sul - Brésil), élaborée d'après un texte informatif, dont l'idée centrale était la définition d'un concept - Chaînes Alimentaires; 2) une explication commune ou sous-jacente (principe particulier ou principe général) à quatre phénomènes différents: l'invasion des "caturritas", l'invasion des best-sellers étrangers, la faillite des microentreprises et le problème de la délinquance juvénile.

Pendant le cours expérimental, on a proposé, simultanément, trois groupes d'activités: celles qui ont été programmées autour du "monde des concepts" (opérations non-langagières); celles programmées autour du "monde de l'explication" (opérations langagières) et celles programmées autour du "monde microlinguistique" (sous la forme de "facilitations procédurales").

2.3. L'analyse des données

Pour procéder à l'analyse des données, on a établi quelques critères d'évaluation. Le référent pour l'identification du degré de précision et clarté a été le rapport entre les opérations de sélection et combinaison examinées au niveau cognitif-macrostructurel (organisation textuelle), microstructurel (maîtrise des opérations de mise en mots) et discursif (reformulation). Trois niveaux ont été échelonnés permettant l'identification du degré de généralisation et transfert: l'identification d'éléments communs aux phénomènes présentés, la formulation de principes particuliers et la formulation de principes généraux. La fréquence de certains comportements (l'étudiant se montre toujours prêt à réaliser les travaux, manifeste spontanément une attitude de questionnement, etc.) a été fixé comme critère d'évaluation de la prédisposition des élèves.

2.4. Résultats

Les résultats obtenus (validés statistiquement) ont révélé un gain positif du GE par rapport au GC. Du point de vue de la clarté et précision, les chiffres attestent un développement considérable, soit des compétences discursives, soit des compétences linguistiques, mais ce sont les résultats concernant les aspects cognitif-macrostructurels qui se sont montrés les plus significatifs.

Dans les opérations de généralisation et transfert, on a vérifié une évolution également importante qui s'est concrétisée au passage d'un niveau d'abstraction à d'autre ou d'un stade à un autre stade supérieur dans un même niveau.

Quant aux indicateurs de prédisposition, les résultats dénotent qu'au fur et à mesure que le cours avançait, croissait le niveau d'attention, intérêt et réceptivité.

3. CONCLUSION

D'après l'analyse des données, on peut affirmer que les résultats ont validé - bien sûr que pour l'univers de la recherche - une modalité d'action pédagogique qui:

- . part des principes cognitivistes d'apprentissage;
- . entend la langue comme un fait social et psychologique;
- . situe l'étude de la grammaire dans une approche textuelle et l'étude du texte, dans une approche pragmatique;
- . prend en considération les rapports étroits entre les aspects macro/microstructurels et les aspects discursifs;
- . établit un rapport direct entre l'amélioration du produit final (TE) et le développement des compétences de production;

. rattache la compréhension et l'élaboration des connaissances scientifiques à l'habileté de lire et de produire des textes explicatifs.

NOTE

(1) Caturrita: petit oiseau psitaciforme, de la famille des psitacides (*myiopsitta monachus catorra*); de coloration verte, le front et le côté ventral jaunâtres, rémiges bleues, fait son nid en colonie.

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L'ÉVALUATION DE LA RICHESSE LEXICALE : UNE MÉTHODE

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Comment dire qu'un texte est plus ou moins riche qu'un autre? On a proposé un grand nombre de formules qui ont toutes la prétention de mesurer correctement la richesse lexicale. Nous avons étudié en détail ailleurs (1) plusieurs de ces formules (K de Yule, V_m et $C = \log V / \log N$ de Herdan, R de Guiraud, la loi binomiale de Muller, W de Brunet et U de Dugast). Toutes reposent sur un postulat définitoire identique : un texte est plus riche qu'un autre s'il contient un plus grand nombre de vocables (V) pour un même nombre de mots (N) (2). Autrement dit, entre deux textes d'égale longueur, le texte le plus riche est celui qui contient le plus de mots différents. Cette affirmation presque simpliste a l'avantage de bien montrer que le concept dont il est question est purement quantitatif. Du point de vue linguistique, il s'agit d'un concept naïf qui fait l'économie d'à peu près toute analyse, en particulier de toute analyse lexico-logique ou stylistique.

Les méthodes qui ont servi non pas à la mesure de la richesse lexicale mais à l'évaluation des mesures (ou formules) proposées sont nombreuses. La plupart sont le fait des auteurs de formules eux-mêmes qui semblent cependant, à l'exception de Yule (3), plus préoccupés d'établir la valeur de leur trouvaille que de s'interroger sur les conditions méthodologiques qui auraient permis d'arriver à des preuves irréfutables. Il existe, par ailleurs, une thèse, celle de Nathan Ménard, soutenue en 1972 mais publiée seulement en 1983, dont le titre même (4) incite à examiner avec soin les méthodes qui y ont été utilisées, même si l'accent y a été placé plus sur les vérifications expérimentales que sur l'analyse des méthodes. Or, à défaut d'une méthode fiable d'évaluation des formules, on ne sait toujours pas avec certitude si telle ou telle formule permet de mesurer adéquatement la richesse du vocabulaire d'un texte.

Nous exigerons de la méthode que nous utiliserons qu'elle soit rigoureuse et objective en ce qu'elle devra proposer une procédure explicite à partir de laquelle nous pourrons dépasser les évaluations plus ou moins approximatives et déboucher sur des conclusions sûres parce que fondées sur une véritable démonstration. Idéalement, la méthode sera assez rigoureuse et objective pour qu'un autre chercheur l'utilisant arrive aux mêmes résultats. Cette méthode devra aussi être systématique et suffisamment générale pour pouvoir s'appliquer indistinctement à l'une ou l'autre des mesures de la richesse lexicale. Les

principes de la méthode expérimentale de Claude Bernard nous serviront de guide. Nous chercherons donc à identifier et à isoler les variables en cause, puis nous ferons fluctuer à tour de rôle chacune d'entre elles pendant que les autres seront maintenues constantes. Une telle méthode comporte l'avantage de dire précisément dans quelle mesure tel ou tel facteur est responsable des variations observées.

Dans l'étude particulière des mesures de la richesse lexicale, la plupart des chercheurs retiennent deux variables qui sont la richesse, c'est-à-dire la diversité des vocables, et la longueur des textes. Mais comment être certain au départ que deux textes quelconques sont de richesse différente quand on remet en question les formules qui prétendent précisément évaluer leur richesse? Il est important, si l'on veut éviter tout doute sur des conclusions relatives à la fidélité avec laquelle les formules évaluent la richesse lexicale, de trouver deux textes (ou plus) dont la différence de richesse soit à ce point évidente qu'on puisse la considérer comme un postulat. Nous avons donc choisi un texte littéraire (*Bilan de Marcel Dubé*) dont la richesse peut être considérée comme indéniablement supérieure au corpus formé des bulletins quotidiens de météo publiés par le journal *Le Monde* entre juin 1974 et juin 1975 (5) qui nous a servi de deuxième texte (6).

Quant à la longueur, les vérifications de Yule et de Ménard ont porté sur des fragments de texte relativement courts. Les échantillons que Yule a prélevés sur l'*Essay on Bacon* de Macaulay (8045 mots) lui ont servi à construire des «textes» de 2 000, 4 000 et 6 000 mots. Ménard a travaillé sur des tranches de texte encore plus courtes de 500, 1 000, 1 500 et 2 000 mots. Or, la courbe que décrit la relation de N à V est beaucoup plus marquée dans les petites longueurs que dans les moyennes ou dans les grandes. De plus, certaines formules, comme celle de Guiraud, ne prétendent même pas être constantes avant 10 000 mots. Si l'on veut leur rendre justice, il faut les évaluer avec des textes dont la longueur correspond à leur zone de validité présumée. Nous avons donc choisi de vérifier les formules à partir d'échantillons de 5 000, 10 000, 15 000, 20 000, 30 000 et 40 000 mots prélevés sur deux textes de longueur moyenne (23 000 et 45 000 mots).

Les recherches sur la mesure de la richesse lexicale ne tiennent compte en général que des deux variables que sont la richesse et la longueur des textes. Mais un examen un peu plus poussé permet d'en repérer d'autres. Ainsi, il nous semble qu'on devrait distinguer une richesse lexicale de type stylistique d'une richesse d'origine thématique parce nous pensons que chacun de ces types de richesse influence à sa façon la valeur que prennent les indices. Mais dans l'état actuel de la recherche, il paraît difficile sinon impossible d'isoler et de faire fluctuer ces variables mal connues. Faute de pouvoir intervenir de la façon habituelle, la solution qui s'imposait était non pas de les ignorer totalement parce qu'elles ne sont certainement pas sans importance, mais plutôt de chercher un moyen de les neutraliser de façon à ce qu'elles n'influencent pas le résultat de l'expérience.

Ce moyen devrait aussi permettre tantôt de neutraliser, tantôt de faire fluctuer les deux autres variables susceptibles d'influencer la mesure que sont la richesse et la longueur. Pour répondre à ces exigences, l'idée nous est venue de déconstruire le texte pour le reconstruire de façon aléatoire. En partitionnant ce nouveau texte dont l'ordre des mots est aléatoire, on peut obtenir des échantillons aléatoires de diverses longueurs. Chaque échantillon d'une longueur quelconque constitue en lui-même un texte aléatoire plus court que le texte original mais représentatif de la richesse lexicale de l'ensemble du texte. On atteint ainsi, en bout de ligne, les trois objectifs de départ qui étaient de maintenir la richesse lexicale constante

pendant que l'on ferait varier la longueur, de faire fluctuer la richesse (en changeant de texte) tout en maintenant la même longueur, et enfin de neutraliser l'action de diverses variables d'ordre thématique ou stylistique difficiles à isoler ou à identifier précisément.

L'échantillonnage aléatoire est un moyen que Yule avait retenu en 1944. Ce dernier n'avait toutefois prélevé que quatre échantillons avec lesquels il avait procédé à toutes les combinaisons possibles. Ménard a retenu cette procédure en 1972, mais avec cette différence fondamentale qu'il a travaillé sur des tranches «naturelles», qui sont en fait des partitions de 500 mots choisis non aléatoirement, là où Yule avait utilisé des partitions aléatoires. La différence est importante, essentielle même, puisque nous avons pu vérifier sur des tranches de 1 000 mots tant dans *Bilan* que dans le corpus *Météo* que la moyenne des V d'une série d'échantillons aléatoires d'un texte diffère considérablement de la même moyenne calculée sur la partition d'un texte en tranches «naturelles» (non aléatoires).

TABLEAU 1. Comparaison du vocabulaire moyen des tranches naturelles et aléatoires dans *Bilan* et dans le corpus *Météo*.

Tranches	<i>Bilan</i>		<i>Corpus Météo</i>	
	naturelles	aléatoires	naturelles	aléatoires
n. de tr.	23	46	45	45
V moy.	298,7	322,5	232,9	244,4
s	21,32	13,07	12,76	7,27

Ces différences reflètent la spécialisation lexicale des tranches naturelles. Et on ne pourrait les atténuer en calculant la moyenne des moyennes de toutes les combinaisons possibles de tranches naturelles puisque cette moyenne des moyennes serait strictement égale à la moyenne des 23 ou des 45 tranches naturelles. Il semble donc impossible de représenter fidèlement la richesse du texte original à partir de tranches naturelles. L'utilisation de tranches aléatoires s'imposait donc.

Nous avons choisi de prélever un nombre assez considérable d'échantillons aléatoires, plus précisément 30 de chaque longueur, sur chacun de nos textes (7). Un tel nombre permet surtout d'obtenir une représentation très fiable du texte original dans chaque longueur retenue. C'est le premier et principal avantage recherché. De plus, il permet en principe d'obtenir une distribution normale (8), ce qui facilite souvent le traitement statistique ultérieur. Il permet aussi d'éviter la faiblesse dénoncée par Yule lui-même quand il affirmait à propos des quatre échantillons sur lesquels il avait fondé l'étude de sa «caractéristique» qu'un tel nombre était «ridiculement bas» pour une utilisation de l'erreur type.

Le raisonnement que nous appliquons à ces données est le suivant : puisque les échantillons sont aléatoires, on peut poser en principe que leur richesse lexicale correspond fidèlement à la richesse du texte original dont ils sont tirés, à l'intérieur, bien entendu, des fluctuations normales dues au hasard. Un indice qui prétend mesurer fidèlement la richesse lexicale devra donc s'avérer constant à travers les diverses longueurs des échantillons. Et s'il ne peut faire preuve d'une telle stabilité, il sera réputé être sensible à la longueur, ce paramètre étant le seul que l'on a laissé varier d'un échantillon à l'autre.

Il reste cependant à trouver un moyen encore plus précis d'évaluer la constance des indices. La statistique nous fournit un tel moyen avec le calcul de l'écart réduit. Nous avons donc d'abord calculé la moyenne de l'indice, son écart type et

son erreur type pour chaque groupe d'échantillons. L'erreur type, qui est l'erreur que l'on risque de commettre en prenant la moyenne des échantillons comme moyenne de la population, nous a permis d'attribuer des limites de confiance à la moyenne de chaque indice dans chaque groupe d'échantillons et de confronter ensuite ces valeurs moyennes à celle de l'indice dans le texte original (population). Pour comparer encore plus systématiquement les formules entre elles, il a suffi de calculer l'écart réduit (z) (9) qui identifie la place, sur une échelle standardisée, de l'indice de la population, c'est-à-dire du texte, par rapport à sa moyenne dans chaque groupe d'échantillons.

Le critère qui permet de conclure qu'un indice reste insensible à la longueur est évidemment celui de la grandeur de ses écarts réduits à travers les échantillons de diverses longueurs : avec des écarts réduits situés autour de 0 et ne dépassant pas ± 2 , on peut parler de variations aléatoires. Au-delà de ces limites habituelles, on affirmera au contraire que l'indice est entaché de façon significative d'une sensibilité à la longueur qui rend sa mesure inexacte et inadéquate pour la comparaison de la richesse lexicale de textes de longueur différente.

Nous avons appliqué cette méthode aux nombreux échantillons prélevés dans *Bilan* et dans le corpus *Météo*. La plupart des indices que nous avons évalués se sont avérés être significativement sensibles à la longueur, au moins pour des étendues de 5 000 à 40 000 mots (10). Seules la «caractéristique» K de Yule et la formule binomiale de Muller ont pu prétendre à une réelle insensibilité à la longueur. Cependant, Yule lui-même ayant déjà indiqué que son indice n'était pas véritablement un indice de richesse lexicale (1944: 82), la formule binomiale de Muller reste la seule formule qui peut prétendre mesurer correctement la richesse du vocabulaire de textes de longueur moyenne.

- 1 On trouvera un exposé détaillé de la problématique de l'analyse de la richesse lexicale et des résultats auxquels nous sommes arrivé dans un livre qui sera publié prochainement chez Slatkine-Champion sous le titre **La richesse lexicale et sa mesure**.
- 2 La statistique lexicale distingue habituellement les *mots*, qui correspondent aux occurrences d'un texte, et les *vocables*, qui sont les mots différents. On peut ainsi identifier un texte par sa longueur (N mots) et le nombre de vocables de son dictionnaire (V mots différents).
- 3 Yule, Georges Udny, 1944, 1968, **A Statistical Study of Literary Vocabulary**, University Press, Cambridge, 1944, réimprimé en 1968 chez Archon Books.
- 4 Ménard, Nathan, 1983, **Mesure de la richesse lexicale. Théorie et vérifications expérimentales. Études stylométriques et sociolinguistiques**, Slatkine-Champion, Genève-Paris, 1983.
- 5 Le corpus *Météo* a été établi par Charles Muller qui l'a généreusement mis à notre disposition.
- 6 Les textes ont été informatisés et lemmatisés de façon à en connaître précisément le nombre d'occurrences (N) et le nombre de vocables (V). Les chiffres obtenus confirment que *Bilan* est indiscutablement plus riche puisqu'il contient deux fois et demi plus de vocables (1901 contre 728) que le corpus *Météo* qui est pourtant deux fois plus long (45 792 mots contre 23 332 pour *Bilan*).
- 7 Le texte aléatoire a été partitionné en tranches de 1000 mots pour *Bilan* et de 2500 mots pour le corpus *Météo*. Les 30 échantillons de chaque longueur souhaitée ont été constitués par le regroupement aléatoire du nombre nécessaire de tranches.
- 8 L'application du test de Kolmogorov-Smirnov à chacun des 8 groupes de 30 échantillons a confirmé que chaque groupe constitué représentait une telle distribution normale.
- 9 Puisque nous sommes dans un contexte d'estimation de la population à partir de la moyenne d'un échantillon, la formule de l'écart réduit est $Z = (\text{indice du texte} - \text{indice moyen}) / \text{erreur type}$.
- 10 Ce fut le cas en particulier pour les indices R de Guiraud, C de Herdan, W de Brunet, U de Dugast, et, bien qu'à un degré moindre, l'indice Vm de Herdan.

QUANTIFICATION ET TYPOLOGIE DANS LA DESCRIPTION GRAMMATICALE

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1. INTRODUCTION

Mon propos sera de démontrer comment à l'aide de la typologie du langage, et plus particulièrement à l'aide de la quantification, on peut constituer une heuristique ferme permettant de dégager les catégories grammaticales d'une langue, indépendamment des influences que peuvent exercer les habitudes grammaticales du descripteur, son savoir linguistique préalable ou son quelconque cadre théorique.

Ma démonstration sera fondée sur le repérage de la catégorie *article défini* dans les langues algonquiennes du groupe cri: deux langues de ce continuum ont été analysées plus particulièrement, le cri des plaines et le montagnais. Les résultats détaillés ne feront intervenir que les fréquences du montagnais (celles du cri des plaines sont à peu près les mêmes). La situation de description des langues algonquiennes a été jusqu'à maintenant faite par des linguistes indo-européens, locuteurs non-natifs, avec l'aide d'informateurs et le caractère textuel de certains phénomènes grammaticaux y a peu été pris en considération. Bloomfield (1946), comme pionnier respecté, a tracé à grands traits les principales catégories grammaticales de ces langues. Cependant, comme l'a fait remarqué Proulx (1988:309), bien que les langues algonquiennes offrent un foisonnement de démonstratifs, Bloomfield a passé sous silence la catégorie *pronoms démonstratifs* pour le proto-algonquin, créant ainsi un malencontreux vide descriptif dans les grammaires algonquiennes. Comme précurseur il s'est par ailleurs peu intéressé à la question des démonstratifs en synchronie, encore moins à leur fonction et à leur fréquence.

Sur la base empirique du montagnais, considéré comme une langue sans article, on verra pourtant qu'en termes de quantification typologique le système des démonstratifs algonquiens remplit au niveau du texte, non seulement tous les critères sémantico-fonctionnels de l'article défini dans les autres langues, mais encore qu'il répond plus qu'amplement aux critères de fréquence textuelle de l'article défini tel que tiré d'un échantillonnage de textes de langues à articles.

2. HISTOIRE DE LA RECHERCHE

Alors qu'il est généralement reconnu que les articles définis proviennent presque toujours des pronoms démonstratifs, les critères permettant de distinguer les uns des autres sont toujours restés vagues. On trouve chez les linguistes une panoplie de citations illustrant le problème de ce flou descriptif dans diverses langues (Serbat 1980:104, Kramsky 1972:passim); il en va de même pour les langues algonquiennes: (Ford et Bacon 1978: 30, Vaillancourt 1978:6, Wolfart 1981:84). Comme le fait remarquer Dryer (1989:83), alors qu'il est relativement facile d'identifier les membres appartenant à la catégorie du nom dans une langue,

facile d'identifier les membres appartenant à la catégorie du nom dans une langue, les critères d'identification d'un article sont moins clairs. Pour sa part, l'auteur en utilisera deux: a) le mot indique le caractère défini ou indéfini, ou quelque chose d'apparenté à ces notions au niveau textuel; ce critère correspond, selon Greenberg (1978) au premier stade de l'usage obligatoire de l'article qui sert désormais à marquer tous les référents qui sont à considérer comme identifiables au niveau textuel. 2) Le mot sert à indiquer un syntagme nominal, en ce sens que les syntagmes nominaux de la langue sont typiquement accompagnés du mot en question; ce critère correspond chez Greenberg au stade III où l'article défini s'affaiblit dans ses fonctions jusqu'à ne devenir qu'un marqueur nominal. C'est le cas du nahuatl, par exemple, où le suffixe *-tl* est un réflexe historique d'un ancien article défini devenu simple marqueur nominal. Dryer accordera le statut d'article aux mots répondant à l'un ou l'autre de ces deux critères. C'est ainsi qu'il considère comme un article le mot *cai* du vietnamien décrit par ailleurs comme "an identifier and whose function is something like that of a definite article".

Dans les langues algonquiennes, à part les auteurs cités plus haut (Ford et Bacon, Vaillancourt, Wolfart), qui ont reconnu dans le système démonstratif algonquin une parenté fonctionnelle avec les articles d'autres langues, peu se sont penchés réellement sur la question. En 1987 Monica Axelsson et moi avons présenté les résultats d'une recherche exploratoire (basée sur le Corpus McNulty) démontrant qu'en montagnais, dès qu'un syntagme nominal atteint le statut sémantique de référentiel défini au niveau textuel, ce syntagme est automatiquement pourvu d'un soi-disant démonstratif et reste pourvu de ce marqueur pour toutes les mentions subséquentes jusqu'à la fin du texte. Ces résultats ont reçu une reconnaissance bienveillante de la part des typologues qui ont vu dans le montagnais une langue à article défini. Chez les quelques algonquinistes à qui ces résultats ont été présentés à l'époque la réception a été plutôt réservée, sinon silencieuse: on voyait peu d'intérêt à vouloir définir une catégorie d'une langue en termes de fonctions apparentées remplies par une autre catégorie dans d'autres langues. Les résultats de cette recherche qualitative n'ont donc pas modifié les intuitions, sinon les présupposés bloomfieldiens de la description algonquiniste traditionnelle. En 1991 j'ai présenté aux algonquinistes les résultats d'une recherche quantitative cette fois, et plus approfondie, sur le même sujet. Les résultats ont alors semblé convaincre immédiatement la société des algonquinistes de l'existence d'un article défini en montagnais. Ce phénomène a son importance à deux niveaux différents: d'abord au niveau de la valeur heuristique de la méthode, comme on le verra par la suite: mais également au niveau de la valeur rhétorique de la quantification dans le discours scientifique comme le lecteur le ressentira probablement aussi par la suite.

3. LES FAITS

En montagnais, pour l'ensemble d'un corpus textuel d'environ 5500 mots (Corpus Drapeau 1981 et 1991) totalisant 26 locuteurs de 13 à 97 ans, on trouve qu'une proportion de 55 % des syntagmes nominaux sont accompagnés d'un démonstratif préposé (le démonstratif est étiqueté de façon plus neutre par l'abréviation DET pour déterminant). Le tableau 1 indique les résultats de l'analyse plus détaillée d'un tiers du corpus montagnais (1652 mots). Les fréquences du cri des plaines (tirées des Student Stories éditées par Freda Ahenakew) apparaissent également entre crochets. La répartition des fréquences pour l'ensemble des SN du corpus détaillé du montagnais se lit comme suit: 58.9 % des SN ont un déterminant préposé, 2.5 % des SN ont un déterminant postposé et 37.7 % des SN n'ont pas de déterminant.

Tableau 1: Position et fréquence d'apparition des déterminants

	DET + SN	SN + DET	$\emptyset = SN$
MONTAGNAIS	59.8 %	2.5 %	37.7 %
[CRI]	50.2 %	1.4 %	48.4 %]

Le tableau 2 pour sa part fait ressortir clairement, pour le montagnais, que les référents ayant un statut référentiel défini sont pourvus à 86 % d'un déterminant dès la première mention et systématiquement pourvus à 100% d'un déterminant à partir de la deuxième mention. Les constructions possessives et les noms propres obéissent pratiquement à la même règle et leur variation peut être portée au compte des effets pragmatiques ou stylistiques. Les constructions locatives (non inscrites au tableau) sont pratiquement toujours accompagnées d'un DET (86%) quelle que soit leur mention. Les référents indéfinis au contraire ne sont jamais pourvus d'un tel déterminant.

Tableau 2: Fréquence d'apparition par mention et classe sémantique

MENTION	1ÈRE	2IÈME	3IÈME
REF-DEF	86 %	100 %	100 %
POSS	29 %	82 %	100 %
PROPRE	58 %	100 %	-
REF-INDEF	0 %	0 %	0 %

Bien que cette quantification de la fréquence textuelle des déterminants nominaux soit assez éloquente sur la fonction des soi-disant démonstratifs du montagnais, nous n'avons jusqu'à maintenant aucun critère autre que notre intuition pour nous dire que ces objets linguistiques peuvent fonctionner comme des articles définis. Et pour cause, nous ne savons pas quelle est la fréquence textuelle des articles définis et des démonstratifs dans d'autres langues. En effet, la littérature linguistique est muette sur ce sujet. J'ai eu l'idée d'effectuer un calcul préliminaire sur des textes narratifs d'environ 700 mots dans 5 langues (= 3500 mots). Le tableau 3 donne les fréquences textuelles de ces catégories grammaticales pour 4 langues à article et une langue sans article (le finnois). Le lecteur pourra lui-même constater la régularité dans l'écart des fréquences entre article et démonstratif. Cela lui permettra de situer lui-même dans quelle catégorie on devrait ranger le montagnais.

Tableau 3 : Typologie des fréquences des articles et des démonstratifs

	(ART) SN (ART)	DEM
Finnois	nil	2.27 %
Français	39.8 %	3.30 %
Italien	40.2 %	6.87 %
Suédois	49.5 %	3.77 %
Allemand	55.0 %	7.07 %
Montagnais	59.8 % DET + SN	2.5 % SN + DET

4. CONCLUSION

Pour la grande majorité des langues à article celui-ci provient d'un ancien démonstratif dont l'usage en se répandant s'est accompagné d'une dilution sémantique (*semantic bleaching*). Dans cette évolution d'un démonstratif vers un article, il est souvent difficile, voire impossible de dire où se situe la limite de passage. Greenberg (1978) a dressé une liste graduée des fonctions de grammaticalisation des démonstratifs en articles. Au point de vue fonctionnel, sur l'échelle de Greenberg, le montagnais se situe comme une langue à article très avancée, entre le stade II et le stade III qui est la phase ultime avant la disparition du système, où pratiquement seuls les indéfinis se retrouvent sans article (Cyr: à paraître). Le tableau 3 ci-dessus, tiré d'un échantillonnage typologique, corrobore parfaitement cet état de faits au point de vue des fréquences textuelles. Parce que le montagnais prescrit l'usage systématique d'un déterminant devant les référentiels définis, les constructions possessives et locatives et les noms propres et parce qu'il restreint à zéro l'usage de ces déterminants devant les référentiels indéfinis, il y a lieu de penser qu'il faille classer ces soi-disant démonstratifs dans la catégorie grammaticale article défini. Cette classification est rendue incontestable lorsqu'on compare les tableaux des fréquences textuelles des articles dans les langues du monde avec le tableau des fréquences des déterminants du montagnais. Tant que ces fréquences intra- et interlinguistiques n'avaient pas été quantifiées, on ne pouvait que supposer que les déterminants du montagnais "pouvaient" fonctionner comme des articles définis. Après l'opération de quantification on se doit de dire que ces marqueurs sont des articles et les classer comme tels dans la description grammaticale de cette langue.

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**MAJOR INTER- AND INTRASYLLABIC BREAK
POINTS IN LANGUAGES OF DIVERSE TYPES:
EVIDENCE FROM TWO NEW EXPERIMENTAL TASKS***

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1. INTRODUCTION

This research extends some of the groundbreaking experimental work on English syllable structure done by Treiman and by Dow, who used a variety of production tasks with individual speakers: (1) word-blending (Treiman 1986), to assess the main break points within syllables; (2) unit-substitution (Dow 1987), to assess the status of various hypothesized intrasyllabic units; and (3) string-inversion and slash-insertion (Treiman & Danis 1988), to determine the location of syllable boundaries. Serious difficulties were encountered in our initial attempts to extend some of these techniques to languages such as Arabic and Blackfoot, whose speakers were often poorly educated and/or illiterate. Two new techniques were subsequently developed to alleviate these problems, and to allow a more efficient group-testing mode: (1) a forced-choice version of the word-blending (WB) task, used to assess the main intrasyllabic break points in selected languages; and (2) a 'pause-break' (PB) task, used to investigate intersyllabic breaks (syllable boundaries).

2. INTRASYLLABIC BREAKS: THE FORCED-CHOICE WORD-BLENDING TASK

Two versions of this task were developed to answer the question of how vowel nuclei related to tautosyllabic consonants: Was a nucleus always linked with a following coda to form a rime-like unit (as in English), or might it join instead with a preceding onset to form a 'body' (Vennemann 1988)? In each language investigated, a variety of monosyllabic input words were presented and two or more blends were offered for selection as output, one set based on a primary prevocalic break point (the 'onset-rime' blends) and the other based on a primary postvocalic break (the 'body-coda' blends). In the four-choice version of this task, two blends of each type were offered, as illustrated by the following English example (where the onset-rime choices are underlined): SMORG + BLAND → (a) SMAND (b) SMOND (c) BLAIRG (d) BLORG. Order of choice-types was, of course, varied, and the distribution of real and nonsense blends controlled; written test forms were also provided (without underlining) as memory aids. An example of the two-form version of the test is as follows: (a) SMORG + BLAND → SMAND (b) SMORG + BLAND → SMOND. While this version required more items to cover the same ground, it reduced the memory burden (and thus allowed for fully oral presentations) and allowed for better overall control.

The WB technique has so far been applied to English, Korean and Taiwanese

(Chinese). Both the four- and two-choice versions were used in the English study, with the results confirming the strong onset-rime preference that Treiman had found with individually produced blends. In the clearest case, involving all nonsense blends on the two-choice version of the test, as in the example provided above, this preference was manifested by a highly significant 69% to 31% margin.

Korean was selected for this investigation as there were preliminary indications (e.g., in Youn 1990) that a body-coda preference might be involved, and our experiments revealed that this was indeed the case (See Derwing et al., in press, for details). Again, both four- and two-choice versions of the test were used, with the following results: in the four-choice version, 79 undergraduate English students in Seoul showed a highly significant 2:1 preference for one or the other of the body-coda blends; in the two-choice version, 80 similar students showed a somewhat diminished but still significant preference for this blend-type. The conclusion thus seems warranted that the primary intrasyllabic break point in this language occurs after the vowel nucleus rather than before it.

To date, in the Taiwanese case, no significant preferences have been shown in favor of either type of blend. Though unexpected in terms of the traditional 'initial plus final' analysis of Chinese syllables, this result is consistent with the idea that such syllables may not be naturally divisible into smaller units (Read et al. 1986).

2. INTERSYLLABIC BREAKS: THE 'PAUSE-BREAK' TASK

The PB task is an oral analog of Treiman's slash-insertion technique, permitting its extension to unwritten languages and illiterate speakers. This task was first applied to English, to determine whether it would serve to replicate the findings of Treiman & Danis (1988). Subjects were asked to choose which of two or three alternative 'breakings' of a word sounded the 'most natural.' For the English word melon, for example, the following three alternatives were offered (where ... indicates the location of a brief pause): (a) mel...on (where /l/ is treated as a first-syllable coda), (b) me...lon (where /l/ is the second-syllable onset), or (c) mel...lon (where /l/ is ambisyllabic). Brief summaries are provided below for the five languages investigated to date. (See Derwing, in press, for details).

2.1 English. The application of the PB task to English replicated all four of the main effects discovered by Treiman & Danis for disyllabic words containing a single intervocalic consonant Ci: (1) stress (first syllable vs. second), (2) vowel quality (first vowel lax vs. tense), (3) consonant quality ('manner' class of Ci), and (4) spelling (whether Ci was spelled with one letter or two). Specifically, for 95 subjects and 38 items, Ci strongly tended to be interpreted as a second-syllable onset unless the first vowel was stressed and lax, as in herald, melon and lemon, in which case the first-syllable coda treatment was generally preferred; the strength of this latter tendency, however, seemed to vary directly with the relative 'sonority' of Ci: /r/ > /l/ > nasal > obstruent. In addition, ambisyllabic choices were preferred only in cases with doublet spellings, such as gallon as opposed to melon. Finally, by adding some bimorphemic words to the stimulus set, we also discovered a fifth, morphological factor, in that there was a sharply increased tendency for a morpheme-final Ci to be retained within the first syllable, as in oily as opposed to doily. Thus validated, the PB technique was then extended to languages where the earlier techniques had proven impractical.

2.2. Arabic results. One such language was Arabic, where not only had an earlier attempt to apply string-inversion failed, but where the standard orthography did not lend itself to the slash-insertion technique, even for literate speakers. Three types of disyllabic words were used in the Arabic experiment: those with single intervocalic

consonants (16 items, such as libad and daras), (2) those with intervocalic CC clusters (13 items, such as 'akbar and nidris), and (3) those containing intervocalic long or geminate consonants (6 items, such as zakkar and darris). In all, 61 subjects were tested, 48 university students and 13 semiliterate speakers (mostly taxi drivers). All speakers showed a significant tendency to break before Ci in words of the first type (78% onset response for students and 70% for semiliterates), as well as to break between the two consonants of the words with clusters (88% and 69%), but a sharp difference emerged between the two subject groups in their treatment of the words with geminates: the students generally preferred the ambisyllabic analysis (75%), thus treating geminates like clusters, but the semiliterate subjects were almost evenly split between this treatment (43%) and the monosegmental onset alternative (40%). Judgments about syllable boundaries thus appear to be another phenomenon strongly affected by literacy. (See Derwing 1992).

2.3. Swiss German. In view of the preceding, Swiss German provided another interesting case, since this dialect has no standardized orthography of its own. (The 'spellings' used below were taken from Weber and Bächtold 1983, which are unofficial and were largely unknown to our subjects.) Three types of disyllabic words were again used, but this time with a focus on differences in the first vowel: (1) words with long vowels (24 items, such as Hüürat and glaasig), (2) with diphthongs (18 items, such as Mäinig and pluemet) and (3) with short vowels, either before single consonants (24 items, such as Foti), before CC clusters (24 items, such as Egli) or before affricates (16 items, such as Chlöpfer), whose segmental status was originally unclear. In all, 24 natives of the canton of Zürich were tested, with the following results: There was an overwhelming preference for the onset treatment for both long vowels (86%) and diphthongs (94%), as well as to break between the two consonants of the clusters (89%). The onset preference also extended to most of the single consonants after short vowels (73%), as well as to the affricates (74%), which were evidently treated as monosegments. Oddly, however, this preference was washed out by the ambisyllabic choice in those cases where Weber & Bächtold used doublet spellings, as in besser and Götti.

2.4. Korean. The extension of the PB technique to the Korean case was complicated by the fact that the standard *hangul* orthography not only represents individual segments, but also groups these into syllable-like bundles. Thus the intervocalic consonant in a string like ani is partitioned by the spelling into a/ni in the word meaning 'not' but into an/i with the meaning 'inside (nom.)', and our early experiments showed that the break point choices were indeed contaminated by word frequency effects when real words were used as stimuli. To overcome this, a set of 19 disyllabic nonsense stimuli were created and incorporated into a two-choice version of the PB task, as illustrated for the string talo: (a) tal...o (b) ta...lo. (The ambisyllabic choice was not provided.) Single intervocalic consonants used were stops (9 items), fricatives (2 items) nasals (4 items) and the flap variant of /l/ (3 items), with one cluster /ky/. Subjects were 101 undergraduate students in Seoul. The results again showed a strong tendency in favor of the onset interpretation for single segments (71% for stops, 77% for fricatives and 75% for the flap), but this was significantly reduced in the case of the nasals (58%). (See section 2.1, where a similar effect of consonant type was noted for English.) The single cluster /ky/ was preferentially split (66%), rather than treated as a complex onset, despite its word-initial occurrence in real words (cf. kyocang 'principal').

2.5. Blackfoot. Blackfoot was another case where earlier attempts to use Treiman & Danis' string-inversion task had failed, and where slash-insertion was also

impractical due to the non-existence of a standard orthography. (The one used here is taken from Frantz & Russell 1988, which is known only to a few specialists.) Even the new PB task posed some difficulties, due to STM burdens imposed by the length of typical Blackfoot words and by the generally limited educational experience of our 24 subjects (the average was 9.7 years). The final accommodation was an abbreviated two-choice version of the test with three very limited classes of words: (1) nine items with single medial consonants (such as stámika and pokóna), (2) six with medial CC clusters (such as mohtóókisi and miistááki) and (3) two with medial geminates (such as ippotóóhtsi). The results still showed a clear preference for the onset treatment of single C's (71%) and to split most clusters (83%), when only coda alternatives were provided. For both the /st/ cluster and the geminates, however, the split and the complex onset treatments were almost equally popular. (See section 2.2 for comparable results for geminates with Arabic semiliterates.)

3. SUMMARY AND CONCLUSIONS

Both the WB and PB techniques have proven useful for eliciting judgments about syllable break points in a wide spectrum of typologically diverse languages and of educational ranges in subjects. Both techniques also readily lend themselves to both group and individual testing. The WB approach has confirmed the prevocalic intrasyllabic break point for English, as well as demonstrating its non-universality in the postvocalic treatment of Korean. Taiwanese exhibited no preference and may be a third, unanalyzable type. As for intersyllabic breaks, the PB technique has revealed a strong cross-linguistic tendency for single segment onsets. Due to complications arising in the English case, however, the obligatory onset principle cannot be supported as an absolute universal, while the maximal onset notion receives no support. Some major literacy effects were also noted.

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CORPUS DES ADJECTIFS CORÉENS : CONSTITUTION ET CLASSIFICATION

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1. PROBLEME DE DEFINITION

La catégorie *Adjectif* a toujours posé des problèmes de délimitation en coréen. Les éléments du lexique qui s'apparentent sémantiquement aux adjectifs des langues indo-européennes (par exemple) comportent en coréen une flexion de type verbal et s'emploient sans copule :

Minu-ka (*kongpuha-nta* + *chincôlha-ta*)
 Minu-nominatif(travailler-Suffixe terminal+gentil-Suffixe terminal)
 (Traduction en français : Minu (travaille + est gentil))

Il s'agit donc d'éléments prédictifs proches du verbe, et dont la définition met en jeu des notions syntaxiques, sémantiques et morpho-lexicales.

La dissociation adjectif/verbe existe dans la tradition littéraire. Elle est surtout basée sur des traits sémantiques (e.g. *statique* vs. *non-statique*). Pourtant, nombreux sont les cas où ces critères sont peu convaincants, en particulier dans les cas d'éléments "sémantiquement" synonymes, comme *mucihata*[ignorant], *kwatohata*[excédant] (classés *adjectifs*) et *molita*, *nômta* (classés *verbes*). D'ailleurs, les nomenclatures d'adjectifs, dans des dictionnaires actuels, ne se superposent pas (par exemple, si le terme *hâtanghata*[concerner] est traité comme un verbe intransitif dans un dictionnaire, il est adjectif dans un autre). Le problème est de décider selon quels critères pertinents on peut tenter de les séparer.

1.1. Critère formel

Notre critère du base concerne la forme des suffixes terminaux qui s'ajoutent systématiquement aux éléments prédictifs. Un ensemble prend *-nta* pour suffixe terminal (du mode déclaratif) et l'autre ne l'accepte pas. L'adjectif sera, pour nous, l'ensemble prédictif formellement défini comme suit :

$$(1) \quad \{\text{verbe}\} = \{Px \mid N_0 W Px\text{-}nta\} \\ \{\text{adjectif}\} = \{Py \mid N_0 W Py\text{-}*nta\}$$

Cette définition recoupe, dans les grandes lignes, les classements existants. Cela s'explique probablement par la nature même du suffixe *-nta*, qui accompagne, en général, des éléments lexicaux non-statiques. Des

particularités morphologiques sont liées aux *Py* (e.g. la dérivation d'adverbe est réservée uniquement aux éléments prédictifs *Py*).

1.2. Recensement des entrées

Le critère (1) nous a permis de constituer une liste des adjectifs à partir des deux principaux dictionnaires coréens (*kukô tä sacôn* (Grand dictionnaire de la langue coréenne) de *I Hi-sîng*, et *sä ulimal khîn sacôn* (Nouveau dictionnaire de la langue coréenne) de *Sin Ki-chôl* et *Sin Yong-chôl*). Sont laissées de côté des formes figées, des formes syntaxiquement composées (locutions) et des formes anciennes dont l'emploi est mal connu. Par contre, nous y avons inclus des formes en *-ita* qui ne sont jamais traitées comme adjectifs. En général, en effet, la séquence en *-ita* est une unité composée d'un substantif (attribut) et d'une "copule *ita*" (obligatoire avec le substantif attribut, contrairement à l'adjectif et au verbe) :

- (2) *Minu-nîn* (*kasu-i-ta* + *haksâng-i-ta*)
Minu-nmtf (chanteur-*ita*-St + étudiant-*ita*-St)
(*Minu* est (chanteur + étudiant))

Mais certaines des séquences en *-ita*, comme dans :

- (3) *Minu-nîn mäsa-e* (*yôlsông-i-ta* + *kîksông-i-ta*)
Minu-nmtf tout-Postp (passion-*ita*-St + obstination-*ita*-St)
(*Minu* est (passionné + obstiné) dans toutes les affaires)

[*nmtf* = postposition du nominatif, *Postp* = postpositions
des compléments, *St* = suffixe terminal déclaratif]

peuvent être décrites comme des adjectifs : elles refusent le suffixe *-nta*, répondent à la question *ôt'ôha-[comment]?* et autorisent un intensifieur comme *mäu/acu*[très] (Nam Jee-Sun 1990).

2. CLASSIFICATION SYNTAXIQUE

2.1. Objectif et cadre méthodologique

La liste ainsi établie contient environ 5000 items (Nam Jee-Sun 1991). Elle constitue le corpus de départ pour l'étude des constructions syntaxiques essentielles des adjectifs, première étape vers la constitution d'un *lexique-grammaire*. Dans ce travail, l'unité de sens minimale est la phrase simple, non le mot isolé (voir M. Gross 1975).

Les classes d'adjectifs sont définies en fonction des compléments essentiels de chacun, et donc des postpositions appropriées à chaque construction. Les adjectifs ne prenant pas de complément accusatif, il est difficile de trouver deux compléments essentiels : la structure de base des constructions simples sera :

N₀-nmtf (*N₁-Postp* + *E*) *Adj-St* [E = séquence vide]

2.2. Postposition = *wa*

La postposition *wa* introduit un rapport de *symétrie* entre *N₀* et *N₁*. Ce rapport, pour nous, se définit formellement par l'équivalence entre la structure : *N₀-nmtf N₁-wa Adj-St* [en fr. = : *N₀* être *Adj* (avec + à) *N₁*] et une autre : *(N₀-wa N₁)-nmtf Adj-St* [en fr. = : (*N₀* et *N₁*) être *Adj*] :

- (4a) *Minu-nîn Gino-wa pisîsha-ta*
Minu-nmtf Gino-wa ressemblant-St
(*Minu* est ressemblant à *Gino*)

Ce cas est à distinguer de celui où la symétrie est introduite non par l'adjectif, mais par un substantif (obligatoire) comme *kwankye*[rapport] :

- (4b) *Minu-nîn Gino-wa kwankye-ka kiph-ta*
 Minu-nmtf Gino-wa rapport-Postp profond-St
 (Minu, le rapport est profond avec Gino)

2.3. Postposition = e

Les compléments en *-e*, plus complexes, comprennent trois types :
 -- les datifs, pour lesquels *-e* alterne avec *-etähüsô*[envers] (mais cette alternance n'est pas une condition suffisante) :

- (5) *Minu-nîn Ina-eke kîkcinha-ta*
 Minu-nmtf Ina-e attentionné-St
 (Minu est attentionné pour Ina)

-- les locatifs, divisés en deux sous-classes (au premier niveau) : celle pour laquelle la construction en *-e* alterne avec une construction à complément en *-lo*, avec croisement des actants (voir Nam Jee-Sun 1992) :

- (6) *pyôl-tîl-i pam-hanîl-e katîkha-ta*
 étoile-Pl-nmtf nuit-ciel-e plein-St
 (Les étoiles sont pleines[partout] dans le ciel de nuit)

pam-hanîl-i pyôl-tîl-lo katîkha-ta
 nuit-ciel-nmtf étoile-Pl-lo plein-St
 (Le ciel de nuit est plein d'étoiles)

et l'autre, qui n'autorise pas cette opération, mais dont le complément locatif peut apparaître comme sujet grammatical de l'adjectif :

- (7) *ai-tîl-i kyosil-an-e cwicukîntîsi coyongha-ta*
 enfant-Pl-nmtf classe-dedans-e très calme-St
 (Les enfants sont très calmes dans la classe)

kyosil-an-i (*E + *ai-tîl-lo*) *cwicukîntîsi coyongha-ta*
 classe-dedans-nmtf (*E + enfant-Pl-lo*) très calme-St
 (La classe est très calme (*E + *d'enfants*))

-- les compléments psycho-évaluatifs, qui caractérisent deux constructions adjectivales : celle des *psychologiques*, qui présentent une alternance de type (6) comme les locatifs mais acceptent un actant complétif (interdit avec les locatifs) :

- (8) *Ina-îi cukîm-i Minu-eke muchôk sîlphî-ôs'-ta*
 [Ina-Gén mort]-nmtf Minu-e très triste-Pas-St
 (La mort de Ina a été très triste pour Minu)

Minu-ka Ina-îi cukîm-ilô muchôk sîlphî-ôs'-ta
 Minu-nmtf [Ina-Gén mort]-lo très triste-Pas-St
 (Minu a été très triste par[à cause de] la mort de Ina)

et celle des *évaluatifs*, qui ne présentent pas cette relation :

- (9) *Ina-ûi chulpal-în Minu-eke acu cungyoha-ôs'-ta*
 [Ina-Gén départ]-nmtf Minu-e très important-Pas-St
 (Le départ de Ina a été très important pour Minu)

**Minu-nîn Ina-ûi chulpal-lo acu cungyoha-ôs'-ta*
 Minu-nmtf [Ina-Gén départ]-lo très important-Pas-St
 (*Minu a été très important par le départ de Ina)

2.4. Postposition = i

Le complément en *-i* sélectionne un certain nombre d'adjectifs dont le complément N_1 est plus ou moins figé (les autres constructions, s'il en existe, sont moins naturelles) :

- (10) *Minu-nîn ocum-i malyôp-ta*
 Minu-nmtf pipi-i pressé-St
 (Minu, le pipi est pressé)

2.5. Postpositions résiduelles (Pr)

Une classe résiduelle a été constituée pour des cas de postpositions marginales comme *-ko* (e.g. l'adjectif *siphṭa*[désireux] dans *Minu-nîn nolâha-ko siphṭa* [Minu est désireux de chanter]).

3. CONCLUSION

Pour l'instant, notre liste de 5000 items se divise en une dizaine de classes définies formellement. Chacune d'elles devra être décrite à l'aide de propriétés (distributionnelles et syntaxiques) spécifiques de la classe représentée. Ces classes pourront être subdivisées en sous-classes par la prise en compte de ces propriétés plus fines, en fonction du type de recherche envisagé.

L'ensemble des informations ainsi répertoriées constitue un ensemble de données structurées qui sont fondamentales pour l'établissement d'un dictionnaire cohérent (électronique ou non) et indispensables à toute étude théorique sur les structures syntaxiques (adjectivales et autres).

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"suit the action to the word; the word/to the
action" (*Hamlet* III, ii. 16–17)

ACTION/WORD COMPATIBILITY IN THE CREATION OF CHARACTER

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1. INTRODUCTION

This paper will attempt to examine an uncommonly dealt with aspect of Shakespeare's artistry focusing on a linguistic-stylistic approach as an aid in literary analysis. We shall study Shakespeare's application of the dramatic value of the verb in depicting the character of his most diverse, controversial hero — Hamlet,¹ (Shakespeare: 1603, ed. Furness: 1963) "the subject of more discussion than any other in the whole literature of the world."² (Bradley 1955:80)

1.1 The crux of his tragedy

Hamlet has undergone a heart-breaking shock. He has accepted the Ghost's injunction to revenge the murder of his father — a binding moral obligation that negates his philosophy, is against his grain. Hurled into an inner conflict waging between spirit and instinct, between his philosophy that he loves and blood revenge that he shrinks from, he is a divided self tortured by irresolution. His delay — crux of his tragedy — his gnawing awareness of it, becomes a protracted obsession, the source of his philosophical probings.

When, for he must, does he act? Under what circumstances? What is the nature of his "interims" of suspended action? In equating verb to action, action to character, to what extent do Hamlet's verbal expressions reflect the dramatic movement of his varying moods, his 'active' or 'non-active' semantic role, his character?

2. A LINGUISTIC METHODOLOGY

Applying the linguistic methodology developed for a study of Lear's verbal expressions³ (Nameri 1984:1–85, 1990:300–312) we shall examine the stylistic means, *in terms of verbal expressions*, by which Shakespeare conveys Hamlet's 'activity' or 'passivity', i.e. to what extent the verb used by Hamlet *in reference to himself* (deleted pronouns or other references to himself must be inferred) reflects action/character compatibility. Or, where is Hamlet's *semantic role* that of an *Agentive* ('active') or a *Non-Agentive* participant *in the action described by the verb in the proposition*? We shall thus confine his participant role to two types: *Agentive* (A) and *Non-Agentive* (NA), the latter embodying *Patient* and *Experiencer*. The verbs are

classified as *Non-Stative* (active, dynamic) and *Stative*.

2.1 Lines of proof

Two parallel lines of proof are drawn where we use *Agentive* (*A*) in two different senses:

(1) Hamlet's explicit performative speech acts⁴ (see, esp. Austin 1962; Jakobson 1960:350–377; Searle 1970:20–71) — imperatives (I), entreaties (E), oaths (O), curses (C), threats (T). All denote *Agenticity* (*A*).

(2) Other speech acts in which Hamlet refers to himself where the verb and its complements (modals, etc.) describing the action of the utterer (Hamlet) determines his *Agenticity* (*A*) or *Non-Agenticity* (*NA*). Imperatives and Entreaties are here included where Hamlet refers to himself but is not necessarily in the *Agentive* (*A*) role but is the Patient or Experiencer. The latter are marked (I₂) and (E₂), respectively, in the *NA* category.

2.2 Examples of the two lines of proof

2.2.1 Line of proof 1 (*A*)

- a. "I pray thee, do not mock me." (I.ii.77)(*A*)(*E*)
 - b. "I have sworn't." (I.v.112)(*A*), (*O*)
 - c. "Do not look upon me,/Lest..." (III.iv.127–129)(*A*)(*I*)
- 2.2.2 Line of proof 2 (*A*) or (*NA*)
- a. "I pray thee, do not mock me." (I.ii.77)(*NA*)(*E*₂)
 - b. "And now I'll do't." (III.iii.74)(*A*)
 - c. "Do not look upon me,/Lest..." (III.iv.127–129)(*NA*)(*I*₂)

2.3 Selected types of Hamlet's verbal expressions

2.3.1 *Performatives/illocutionary acts* (*A*)⁵ (Austin 1962:esp. 32, 83–88; Searle 1970:23)

- a. "I shall...obey you, madam." (I.ii.120)
- b. "I do beseech you." (III.ii.339)

2.3.2 *LET* (*me, us, etc.*) constructions considered as imperatives (*I*) or entreaties (*E*)⁶ (See Quirk et al. 1972:403ff; Doran 1976:94), (*A*) or (*NA*)

- a. "Let us go in together." (I.v.187)(*I*)(*I*₂)
- b. "Let the doors be shut upon him." (III.i.132) (*I*)

2.3.3 *Imperatives, entreaties and other propositions where the verb is omitted but understood (inferred)* (*A*) or (*NA*)

- a. "[Go] away!" (I.iv.86) (*A*)
- b. "And so will I [be buried]" (V.i.267) (*NA*)

2.3.4 *Unreal, conditional or imaginary constructions* (*NA*)

- a. "Would I had met my dearest foe in heaven
Or ever I had seen that day, Horatio." (I.ii.182–183) (*NA*)

2.4 Our counting scheme

A counting scheme is devised to promote as consistent a count (value) as possible yielding percentages of Hamlet's *A/NA* verbal expressions — manifestations of his respective semantic role.

2.4.1 A verbal expression (verb, verb + complements: modals, subordinate clauses, etc.) will be given a value (count) of one when it constitutes a complete, independent speech act, idea, in its dramatic context. This also includes: "Prithee", "Pray", "Pray you" followed by an infinitive and conditional constructions. Hamlet's references to the universal "we", "us", etc. will not be considered.

3. HYPOTHESIS

My hypothesis is that there will be more *A* verbal expressions

(*AVE*) — manifestations of his *A* semantic role — where Hamlet confronts the Ghost, the King, his mother — *the interrelated force motivating his action* —, Ophelia, his art — the play. There will be fewer *AVE* — manifestations of his *NA* semantic role — in the "interims" — his four great soliloquies (I.ii, II.ii, III.i, IV.iv), his rationalizations, his deliberations on the act, his philosophizing.

4. LINGUISTIC RESULTS AND LITERARY ANALYSIS: A COMPATIBILITY

We note a high percentage of Hamlet's *AVE* in:

- 1) his confrontations with the Ghost: prompted to action, he pledges to obey the "dread command" (I.iv, 59% — *with the highest percentage of entreaties in the play*, 20% —; I.v 65% — *with a high percentage of imperatives*, 44% —); 2) his confrontation with Ophelia in the "nunnery" scene (III.i, 58%); 3) the "Mousetrap" scene: Hamlet puts on the play, directs it, interrupts it, exults in the outcome (III.ii, 56%); 4) the "closet" scene: he kills Polonius, admonishes his mother for her immoral behavior, succeeds in effecting a moral change in her, achieving in this *the matter of cardinal concern to him* (III.iv, 71% — *the highest in the play, with the highest percentage of imperatives* (50%) *and a high percentage of entreaties* (9%); 5) his "antic disposition" scenes with Rosencrantz and Guildenstern (IV.ii, 54%) and with the King (IV.iii, 63%); his spontaneous sending to their death of Rosencrantz and Guildenstern (reported in V.ii, the last scene), his eloquent apology to Laertes, the duel, killing the King, pledging his "dying voice" to Fortinbras (V.ii.55%).

The low percentage of Hamlet's *AVE* is manifest in his major "interims" — the four great, self-lacerating, philosophic soliloquies which, *per se*, have little or no part in advancing the plot. These show in I.ii, 30% ("O, that this too too solid flesh would melt,/Thaw, and resolve itself into a dew!"); in II.ii, 29% ("Oh what a rogue and peasant slave am I!"); in III.i, 0% *AVE/0% NAVE* ("To be, or not to be,..."); in IV.iv, 18% ("How all occasions do inform against me,"). We note the drop in the percentage of Hamlet's *AVE* from soliloquy to soliloquy in I.ii, II.ii and IV.iv in marked accord with his desolate, protracted delay, with the lowest in the central and unique "To be, or not to be" soliloquy (III.i) where totally withdrawn, he meditates *with no reference to himself* on the universality and mystery of man, of life and death. We note the low percentage of his *AVE* in III.iii (47%) where he rationalizes and evades his "golden" opportunity to kill the King at prayer. The entire IV.iv — Hamlet's encounter with the forces of Fortinbras which evokes his fourth great soliloquy — shows *the lowest percentage of his AVE in the play* (31%) with a low percentage of imperatives (13%) and entreaties (6%). In direct reference to his delay, IV.iv, specifically his soliloquy, reflects Hamlet's self-proclaimed weakness, his indecision, "...I do not know/Why yet I live to say 'This thing's to do'." His tormenting inner conflict is acute, he has reached bottom.

A dramatic reversal is inevitable. Hamlet is absented, then, for three consecutive scenes returning from the climactic sea-voyage a changed man at V.i. The rise of his *AVE* in V.i to 48% from 31% in IV.iv *where he last appeared* is a dramatic necessity in the movement toward the finale. It is to ascend further in V.ii to 55% with Hamlet, resolute, enlightened and reconciled. The procrastinated

fearful act is at last committed—in keeping with his controversial nature — on impulse in the compulsive circumstances.

5. CONCLUSION

The results obtained correlate with my initial hypothesis (see p. 2, above). They evidence the compatibility between Hamlet's verbal expressions *A/NA* and his corresponding semantic role. We find, for example, a low percentage of his *AVE* in his four great self-searching, questioning soliloquies: 30% (I.ii), 29% (II.ii), 0% (III.i), 18% (IV.iv). Compare, now, his *A* role in III.iv, where confronting his mother, he succeeds in morally converting her — *his major concern*, 71% *AVE*, *the highest in the play*. Or, take III.ii.1-36, where Hamlet joys in the act of instructing the players: "Speak the speech, I pray you, as I pronounced/it to you, trippingly on the tongue...;/ suit the action to the word, the word/to the action... o'erstep/not the modesty of nature...": 75% *AVE*/25% *NAVE*. Compare the relatively opposite ratio in the *equally short passage* of his last great self-lacerating soliloquy (IV.iv.32-66): 18% *AVE*/82% *NAVE*.

The dramatic rise and fall of his *AVE* throughout are palpable manifestations of his diverse, controversial character — his divided self, his vacillating states of mind, his torturing inner conflict. The conclusive results analyzed in this paper illustrate an *additional* aspect of Shakespeare's artistry — his ingenious merging of linguistics and stylistics in the creation of character. The approach undertaken in this study illuminates the invaluable contribution of linguistics to literary analysis, shedding light on aspects of character that might otherwise be overlooked and/or misunderstood.

NOTES

- (1). (Shakespeare: 1603, ed. Furness: 1963)
- (2). (Bradley 1955(1904):80)
- (3). (Nameri 1984:1-85, 1990:300-312)
- (4). (See, esp. Austin:1962; Jakobson 1960:350-377; Searle 1970:20-71)
- (5). (Austin 1962:esp. 32, 83-88; Searle 1970:23)
- (6). (See Quirk et al. 1972:403ff; Doran 1976:94)

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SOUPÇON ET SUSPICION D'APRES LA BASE FRANTEXT

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Cette recherche propose une approche méthodologique, sous forme de tentative de systématisation de notre utilisation de FRANTEXT. L'étude porte sur une paire de doublets étymologiques soupçon et suspicion dès le XIV^e au XX^e siècle et s'assigne le but de rendre compte de la concurrence et des enjeux dont ils sont l'objet tout au long de l'histoire de la langue française.

Dans cette perspective, il s'agit d'accumuler les contextes appartenant à des époques et sphères différentes, de les classer, de les replacer dans les textes dont ils sont issus, de les mettre en relation entre eux quand ils appartiennent à des domaines différents, afin de repérer les régularités sémantiques et syntaxiques qui s'y dessinent et les ruptures de ces régularités. Cette démarche est indispensable pour pouvoir suivre l'évolution d'un sens au cours des siècles, pour pouvoir dégager des emplois ou des nuances sémantiques nouveaux.

Notre corpus de travail est constitué en fonction des mots cooccurents soupçon et suspicion, des périodes et de la représentation des auteurs et des genres dans chaque époque. Vu la richesse du matériau fourni par FRANTEXT, nous nous sommes senti obligés de limiter les contextes à des tranches chronologiques précises. Le logiciel STELLA nous a sélectionné en ordre chronologique toutes les occurrences de soupçon et suspicion se rapportant à la première décennie des quatre siècles (1578-1968). Les XIV^e et XV^e siècles sont représentés par l'ensemble des textes de la base de données textuelles du moyen français qui sera complètement accessible après son exploitation pour le Dictionnaire de moyen français.¹ Le corpus d'étude du moyen français est constitué sur la base de 126 ouvrages et 181 occurrences. Pour compléter l'analyse de données contemporaines nous avons eu recours à un corpus supplémentaire se rapportant à la période de 1943 à 1968. En somme, le corpus d'étude du XVII^e au XX^e siècle compte près de 14 millions de mots, 1506 références bibliographiques. 560 occurrences de soupçon et suspicion.

Le tableau de la répartition et de la fréquence des doublets étymologiques selon les périodes chronologiques analysées

Période	XIV	XV	XVI	XVII	XVIII	XIX	XX
	1578	1600	1700	1800	1900	1943	
	1599	1610	1710	1810	1910	1968	
Nombre d'occurrences							
soupeçon	1	6					
souspeçon	103	12					
suspeçon	-	3					
soupçon	-	-	3	71	38	91	120
en somme	104	21	3	71	38	91	120
							200
							648
sousspection	-	2					
suspception	1	14					
suspicacion	1	-					
suspicion	3	35	-	-	-	5	3
en somme	5	51	-	-	-	5	2
au total	109	72	3	71	38	96	123
							229
							93

Le tableau démontre une fréquence supérieure de soupçon sur suspicion au cours de toute l'histoire du français (648 occ. contre 93 occ.). Ce n'est que le XVe siècle qui constitue une exception en manifestant une préférence marquée pour suspicion (51 occ. contre 21 occ.). Ce fait va à l'encontre de l'opinion de P.Guiraud (Guiraud 1966 : 55) qui considère que le XVe siècle marque un net arrêt de la création de latinismes, sans toutefois pouvoir en expliquer les causes. On constate également une tendance marquée à l'accroissement de la fréquence des deux synonymes au XXe siècle. L'absence de suspicion aux XVIIe-XVIIIe siècles correspond aux tendances puristes de l'époque classique qui ne cherchait plus à enrichir la langue, mais plutôt à l'ennoblir en évitant les mots de métiers et les termes techniques, les excluant de la langue littéraire et commune². Les variantes graphiques sont propres au moyen français, mais la diversité graphique caractérise de préférence le XVe siècle. La forme contemporaine "soupçon" que le Petit Robert (Robert 1980) rapporte au XIIIe siècle, n'apparaît qu'au XVIe siècle³. Dans nos listes des occurrences sont absentes les formes attestées par les dictionnaires (G. Larousse 1971-1978; Robert 1958-1964; Lexis 1979) depuis le XIIe siècle: sospeçon, sopeçon, suspcion. La forme "soupeçon" datée dans Larousse (G. Larousse 1971-1978) de 1240 ne figure dans notre corpus qu'au XVe siècle.

Pour éviter l'arbitraire des choix sémantiques, nous nous sommes situés dans un domaine qui touche à la syntaxe. Le logiciel STELLA nous a sélectionné

à l'intérieur de FRANTEXT sept corpus de concordances de soupçon et suspicion d'après le critère chronologique (voir le tableau). Chaque concordance constitue un énoncé plus ou moins long, référencé de manière très précise: auteur, titre, date, page.

Le premier corpus d'étude comprend les concordances de soupçon et suspicion d'après les textes du XIVe s. Les énoncés qui les restituent dans les contextes confirment la très grande généralité impliquée par l'ensemble des définitions des dictionnaires. La plupart des occurrences de suspicion appartiennent aux traductions du latin.

Dans le corpus des concordances du XVe s. la forme moderne "soupçon" est absente. Les contextes syntaxiques restent les mêmes qu'au siècle précédent. Au début du siècle on trouve un emploi particulier de soupçon que l'on pourrait définir par "le fait de concevoir, de conjecturer, de soupçonner qch." On attribue la date la plus réculée de la première attestation de ce sens au XVe s. (G. Larousse 1971-1978). On y cite aussi un énoncé de Retz se rapportant à cette acceptation à qui on attribue le premier emploi de l'expression "entrer en soupçon" attestée en 1673. Les concordances des ouvrages du XVe s. enregistrées par FRANTEXT permettent de modifier les données des dictionnaires. Les premières attestations de l'usage de l'expression se rapportent dans notre corpus à 1400 (Froissart). Plus tard, en 1489, se rencontre chez Commynes "entrer en suspicion". Les formes cooccidentales s'emploient dans les contextes identiques et se rencontrent chez les mêmes auteurs.

Les corpus des XVIIe-XVIIIe ss. n'ont que les occurrences de soupçon.

De la lecture des concordances de la première décennie du XIXe s. on constate deux faits importants: l'utilisation de nouveau dans les textes de suspicion (5 occ. sur 96 occ. relevées à cette époque); l'acceptation de soupçon "une petite quantité de qch." datée de 1798 est absente dans notre corpus. Tous les cas de l'emploi de suspicion se rapportent aux textes spécialisés (4 occ. sur 5 occ. appartiennent au terme du droit "suspicion légitime"). Ce fait met en doute l'opinion d'après laquelle le mot suspicion, courant au XVIe s., s'étant spécialisé dans la langue du droit s'est de nouveau étendu à la langue courante du XIXe s.

La fréquence de suspicion dans le corpus contemporain a une tendance à l'accroissement de son utilisation, surtout dans les textes spécialisés. Son usage dans la langue courante est plus rare, bien qu'il y ait aussi des cas de son emploi parallèle à soupçon. Dans ce cas se manifestent trois tendances: différenciation sémantique ou syntagmatique, emploi équivalent.

L'étude de l'usage de soupçon et suspicion au cours de l'histoire du français décèle les faits suivants: l'importance de l'élément savant au XVe s.: l'équivalence sémantique et fonctionnelle des doublets étymologiques au moyen âge, la diminution du rôle du mot savant aux XVIIe-XVIIIe siècles; la tendance à l'accroissement de ce rôle vers la deuxième moitié du XXe s. ainsi qu'à la différenciation sémantique et fonctionnelle; les ruptures des régularités sémantiques et syntaxiques se dessinent, pour la plupart, aux XVe et XVIIe siècles. Dans l'ensemble notre étude reste partielle. L'utilisation de FRANTEXT n'a pas apporté de réponses directes à nos questions, elle nous

a fourni de nombreuses hypothèses qu'il faudra vérifier. FRANTEXT, constituant actuellement la source textuelle la plus riche, est un outil précieux pour l'étude historique du français. Toutefois, pour augmenter son rendement il est nécessaire d'avoir accès au plus grand nombre possible de contextes dans les tranches chronologiques embrassant toutes les périodes. A présent l'ancien français et le XVIIe siècle manquent. Le moyen âge ne sera accessible qu'après son exploitation pour le dictionnaire de moyen français. Le corpus reste peu spécialisé.

NOTES

1. Le Dictionnaire de moyen français fait partie du programme de l'INaLF qui se réalise actuellement sous la direction de Robert Martin.
2. Voir La lexicographie française du XVIe au XVIIIe siècle. Actes du Colloque International de lexicographie. 9-11 octobre 1979, publiés par Manfred Hofler. Wolfenbuttel, 1982, 65-79.
3. Le XVIe siècle n'est représenté dans la recherche que par trois exemples attestés à partir de 1578, date à laquelle remonte la base de données textuelles de FRANTEXT.

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TOWARDS MEASURING SPEECH FLUENCY
IN FOREIGN LANGUAGE USE

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1. Professional discussions on the evaluation of speech proficiency in foreign language use has led to the idea that measuring fluency should get more attention.

Fluency in language pedagogy means usually more than speed, but less than the instinctive rhythmicity of the native speech. It is an issue of foreign language use. Speech conveys the message of the mind by means of organized noise. Fluency shows outwardly how it is organized in the foreigner's mind.

Since the flow of speech can be recorded on a tape and presented in a graph, we can measure it instrumentally. In fluency we measure time and changes in sound intensity. The graph we use for fluency evaluation we should call tentatively "glottogram".

Measuring fluency does not only mean something of practical interest, it tackles the sound-and-silence antinomy, the basis of any comparative study of languages.

2. The idea of using glottograms in fluency tests came from intensive, speech-oriented intermediate language courses where the student's one-minute speech performance was recorded on tape as the proficiency test. To elicit the student's fluent speech, the interviewer asked him an "easy" question about his life and likings. The time effectively spent in oral performance was related to the length of the time the student spent in hesitation, at zero level of sound intensity. The correlation of the figures gave the result of the test.

This is the pattern we have developed in practice and in post-hoc analysis. In my paper I should like to relate briefly on comparisons, and coefficients of the fluency score.

3. First we needed a great number of glottograms for orientation. We obtained them from the fluency tests of university and college students or postgraduates, learning English or Japanese at intermediate level.

We compared not only glottograms of fellow-students. For the comparative analysis, we recorded special standard glottograms with natives. When we studied the performance of a Hungarian, learning Japanese, we put his Japanese glottogram between the Japanese and the Hungarian standards. So, we could see parallelly the genuine Japanese and the genuine Hungarian speech contour, together with the Hungarian student's Japanese in between. The procedure proved to be informative, and convincing.

On Figure 1, we can see an "interlanguage" Japanese glottogram contour in Hungarian and Japanese context:

GLOTTOGRAM IN CONTEXT

1. Hungarian glottogram
2. HUNGARIAN'S JAPANESE GLOTTOGRAM
3. Japanese glottogram



Figure 1

The visual comparison illustrates how the interlanguage production at intermediate level depends on the deeply ingrained mother-tongue habits.

4. The comparative study of glottogram contours led to assaying quantifiable coefficients in fluency tests. We named the most often used tentative coefficients: activity coefficient, concentration coefficient, flexibility coefficient, and content coefficient.

As already mentioned, the first coefficient is given in the correlation of the allotted and actually used speaking time. The sum of the speech segments, measured in mm/sec in the allotted time, indicates the "activity" index of the score.

We call the third coefficient "flexibility" index. It shows the sound intensity changes, measured in the vertical dimension in decibels. Statistical techniques work here on "relative standard deviation".

COMPARING FLEXIBILITY INDICES

Student /S ₁ , S ₂ , S ₃ , S ₄ , S ₅ /	Flexibility /F/
Postgraduate /P/	Index in % /I/
Native speaker /N/	Ranking /R/

	S ₁	S ₂	S ₃	S ₄	S ₅	P	N
I	2,6	2,7	4,2	2,4	4,5	5,1	3,1
P	6	5	4	7	3	2	1

Figure 2

When developing the original fluency test procedure, we came to a fourth coefficient. In order to facilitate the examinee to find what to say in his one-minute fluency test on the target-language, he was invited to tell his answer in the mother-tongue first. We thought we could take the mother-tongue version of the test for "content", and the target-language version for "expression". The correlation of the two, we took for content coefficient of the fluency test. When the scheme worked, it was very informative, but sometimes it did not work.

5. On Figure 3, we see the fluency score sheet of a small group of students /S₁, S₂, S₃, S₄, S₅/ . Each student has a column on the sheet with his scores in percentage, and his rank in the group. The average score, coming from the coefficients, and the ranking given by the teacher on the basis of her classroom experience, do not differ considerably. There is only one bias on the sheet we had to check: according to the concentration coefficient, student S₁ spoke in very short speech segments. The concentration index indicated it. /*/

SCORE SHEET

C \ S	S ₁	S ₂	S ₃	S ₄	S ₅
C ₁	P	77,45	72,44	47,87	75,33
	R	1	4	5	2
C ₂	P	79,05	55,67	58,16	67,99
	R	1	5	4	3
C ₃	P	*25,92	42,49	38,54	44,34
	R	5	2	4	1
A	P	60,80	56,87	48,19	62,55
	R	3	4	5	1
T		1	5	4	2
					3

Figure 3

Activity Coefficient /C1/ Performance /P/
Content Coefficient /C2/ Ranking /R/
Concentration Coefficient /C3/ Average /A/

5. It is no part of my thesis to overestimate the perspectives of the acoustic or the statistical approach of speech. But I do believe that these approaches may stimulate new interest, discussion and results about old issues of practical and theoretical studies.

Our results in measuring fluency in speech have not gone very far yet. The greatest result of our work is that we can feel the constraints of our possibilities, and we know how to do it better than we have done sofar.

Our key objectives are: extension of the glottogram interlanguage study; pedagogical organization of the cross-control scheme /e.g. "the twin-group system"/; improvement of the technical production of glottograms.

6. Reference:

J.C.Catford /1988/, A Practical Introduction to Phonetics, Oxford: Clarendon Press.

L'ATLAS LINGUISTIQUE DU PAYS BASQUE:
QUELQUES POINTS DE METHODOLOGIE

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Cette communication présente quelques caractéristiques de l'Atlas Linguistique du Pays Basque -*Euskal Herriko Hizkuntz Atlasa*- en cours de réalisation sous le patronage de EUSKALTZAININDIA et du CNRS. Cet Atlas est certainement tardif. Les dialectes basques sont doublement menacés, puisque d'une part la langue basque subit les assauts de ses puissantes voisines castillane et française, et que d'autre part, les dialectes sont concurrencés par l'apparition d'une langue standard. Irrémédiable est la perte d'information dans certaines zones telles que le Roncal ou le Salazar, où les derniers bascophones viennent de disparaître. En dépit de ces limitations, l'objectif central de l'atlas n'en reste pas moins de montrer sur le domaine le continuum et la variation.

C'est tout le territoire de la langue basque parlée aujourd'hui qui est exploré par cet atlas, par delà les frontières administratives. Le réseau des points d'enquête -très dense- comprend 145 points d'enquête, dont 100 sont situés en Navarre, Araba, Biscaye et Guipuscoa dans l'état espagnol, et 45 en Soule, Basse-Navarre Labourd dans l'état français. Dans le questionnaire de 3000 questions, le lexique a la part belle comme dans la plupart des atlas; cependant, 700 questions sont consacrées aux traits principaux de syntaxe et de phonétique combinatoire et surtout à la morphologie nominale et verbale. Bien des faits de phonétique et phonologie seront tirés des réponses du lexique et de la morphologie. Le questionnaire tente de donner une vue cavalière de la morphologie verbale dont on connaît la luxuriance, louée par les apologistes mais redoutable pour le dialectologue. Nous n'avons pas évité d'affronter les formes allocutives dans lesquelles l'interlocuteur tutoyé ou vouvoyé est représenté par un indice dans

la forme verbale conjuguée alors même que ce n'est pas un actant dans le procès. La difficulté est alors de simuler avec le témoin le contexte d'énonciation adéquat. Le nombre élevé de stimuli produits en vain est la rançon d'une enquête complète.

La méthodologie de l'enquête lexicale (Videgain 1989) met en lumière non seulement la variation de la forme phonétique, mais aussi le changement ou la vacillation du contenu sémique que cernent les contextes définitoires obtenus des témoins. L'enquêteur traque les appellations palliatives et ludiques. Les items phraséologiques sont recherchés comme indicateurs du mouvement lexical et révélateurs de la rhétorique sociale. Les textes stimulés auprès des témoins reflètent leur savoir encyclopédique et démontrent que l'ethnographie est une bonne voie pour pénétrer le lexique d'une communauté. Si beaucoup de ces textes sont documentaires ou didactiques, certains, pour une bonne part inédits, représentent les diverses versions de narrations mythiques.

Deux exemples tirés de la phraséologie illustreront notre ambition. Soit la question 'fourmi': après avoir relevé le vocable: *xinurri*, *xinhaulri*, *üñhürri*... on obtient aussi l'emploi métaphorique, dont le sens peut changer. Ici, la métaphore s'applique, comme en français et dans La Fontaine, à un individu travailleur et opiniâtre. Là, elle stigmatise l'individu insignifiant. Des sèmes différents ont donc été sélectionnés ici et là pour l'élaboration de la métaphore. Ou bien encore une expression comme *axeria igan zeie artin*, littéralement 'le renard est passé entre eux' - d'ailleurs inconnue des ouvrages de référence comme bien d'autres items obtenus par l'Atlas- est limité à l'aire de la Soule. Mais si à Sainte-Engrâce elle signifie "se fâcher, se brouiller" en général, les conditions d'emploi sont plus resserrées dans le village limitrophe de Larrau: 'rompre, casser' en parlant d'un couple. La motivation de l'expression reste opaque, bien que systématiquement on relève les commentaires des locuteurs quoi qu'on pense de leur pertinence philologique.

L'utilisation des "faits négatifs", ou le recours à la sémasiologie en complément de l'onomasiologie, s'est montré d'une grande puissance en ayant considérablement enrichi la collecte et développé de multiples renvois entre géosynonymes et faits de polysémie. On doit à X. Ravier (Ravier 1965) d'avoir sistématisé cette méthodologie. Les réactions du locuteur sont aussi codifiées sur la minute d'enquête: ancrage du témoin dans son parler et

disposition envers les termes venus d'ailleurs, conscience linguistique, jeu des registres, commentaires métalinguistiques, représentation de l'espace dialectal...

Les enquêtes ont été intégralement enregistrées sur magnétophone Uher en 9,5 cm/s. A ce jour les enquêtes sont terminées et regroupent 4500 heures de phonogrammes. Nous sommes conscients que l'Atlas n'opère qu'une des lectures possibles de l'événement unique qu'est l'enquête. Nous savons par exemple avoir passé sous silence la question de l'interaction enquêteur-témoin. Nous pensons cependant offrir un bon corpus de l'oralité basque de 1985 à 1992.

Actuellement l'atlas en est à l'étape de la saisie des minutes d'enquête grâce à l'élaboration d'une base de données qui permettra le traitement de la collecte sur micro-ordinateur et sa mise en archive sur gros système (600 millions d'octets). Si la cartographie demeure l'objectif central de cet atlas, les objets recueillis et traités fourniront en outre matière à une somme d'informations linguistiques et encyclopédiques qui serviront de base à un dictionnaire culturel localisé. Nous souhaitons aussi pouvoir bâtir un atlas parlant à l'instar de l'excellent prototype mis au point en domaine ladin (cf. Bauer; Goebel 1991) qui a l'immense avantage pour l'usager de permettre la consultation de la matière phonique elle-même.

Nous n'avons pour l'instant bâti que la première partie de l'informatisation, soit la saisie des minutes d'enquêtes. Le détail est à consulter dans G. Aurrekoetxea: 1992. Nous avons visé le confort pour la saisie sans rien vouloir perdre de chaque objet singulier. Nous travaillons sur des micro-ordinateurs PC et le programme que nous avons conçu repose sur le logiciel Nantucket. Chaque symbole de l'alphabet phonétique utilisé est introduit par une seule touche sur une tablette graphique, est visible à l'écran et peut être imprimé illiko. Il lui est attribué un code interne en machine qui permettra un traitement statistique ultérieurement. A chaque forme obtenue du locuteur est donnée une série d'attributs codés en autant de fichiers sur le n° de question, son titre en français, en espagnol, son libellé, la présence ou non de realia, le point d'enquête, le locuteur, l'enquêteur, le transcriveur, la bande magnétique, son étalonnage. D'autres indications, parfois pondérées, renseignent sur la fiabilité de la réponse, de la transcription, sur la difficulté à répondre, la vitesse d'élocution, la catégorie

grammaticale etc.... Les réponses supplémentaires fournies par les locuteurs dont les faits négatifs évoqués plus haut disposent des mêmes attributs ainsi qu'une codification des commentaires du locuteurs: le terme proposé lui est inconnu, "archaïque", d'un registre marqué, tenu comme d'ailleurs (et le "où" est alors indiqué), de sens différent, de sens voisin. Ces informations peuvent se combiner ou s'exclure selon un tableau de symboles que la machine délivre sur l'écran. Les textes libres sont introduits à volonté, et un système de renvois permet d'assigner une réponse impromptue à l'endroit voulu. Cette application est certes perfectible, les premiers mois de mise en route ont donné lieu à bien des mises au point, mais peut rendre service à la saisie d'enquêtes dialectologiques assez approfondies.

Remarque. Voici l'organigramme de l'atlas: Euskaltzaindia (président Jean Haritschelhar), patronne le projet en collaboration avec le CNRS (convention en cours). G. Aurrekoetxea et Ch. Videgain assurent la direction du projet, assistés de I. Atutxa, I. Etxebeste, K. Segurola, A-M. Etxaide et J-M. Etxebarria. E. Olea est l'ingénieur informaticien, de la Société informatique du Gouvernement Basque à Vitoria. Autres informations auprès de: G. Aurrekoetxea, Euskaltzaindia, Plaza Barria, Bilbao ou Ch. Videgain: CNRS, Faculté Pluridisciplinaire, Cours Comte-de-Cabarrus Bayonne 64100.

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SECTION 17

AUTRES

**(LA LANGUE ET LES FEMMES, LE LANGAGE PAR SIGNES,
ETC.)**

OTHER

(LANGUAGE AND WOMEN, SIGN LANGUAGES, ETC.)

CONTINENTAL DISTRIBUTION OF AMERICAN INDIAN PRONOMINAL SYSTEMS

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Pronominal systems constitute a linguistic entity that varies considerably from one language to another. Such variation mainly shows up in the following categories: person, number, gender, respect and sex of speaker. In the case of person, besides the three grammatical persons, we must also consider the opposition inclusive/exclusive that occasionally may be present in the first person plural. As for number, in addition to singular and plural, the possible existence of a dual, a trial, a quadrial or paucal must also be contemplated. With regard to gender, besides the opposition masculine / feminine / neuter, animate / inanimate, human / non-human, and perhaps wild animal/domestic animal, among others can also be found. The dimension of respect can be expressed by means of any of the following devices: specific forms, affixation and changes of person. Finally, on rare occasions there are differences between the pronominal systems used by men and those used by women. Sometimes, such dissimilarities can be explained with the help of historical arguments, but on other occasions the reason or the motivation is completely unknown.

In order to adequately characterize American Indian pronominal systems and to establish their continental distribution, a wide sample of 275 languages and dialects, representing 93 families, conservatively classified, and covering a territory that extends from the Arctic to the southern regions of the continent were reviewed. In the present study only independent pronouns were considered; other personal indexes were excluded. In the past free-form systems and bound-form systems have been compared indiscriminately, and this has led to a lack of precision. Such a confusion of categories, in a cross-linguistic comparison, taints a study from the start, leading to muddled results, since an isomorphic relation it is well-known that does not always exist between independent pronouns and personal affixes.

An initial classification was made on the basis of this sample. A typology of independent pronominal systems was established. Only were taken on account number and gender distinctions, which in the case of pronouns act as deixis reinforcers. In the case of number only plural and dual were considered, since in the whole sample no unquestionable cases of trials, quadrials or paucals were found. As for gender, all those taxonomic features that were identified in the examined systems, which covered gender in a strict sense, as well as classes and even classifiers, were taken into account. In this way, pronominal systems were characterized with three digits, which could be one or zero, depending on the presence or absence of the feature in question. The first digit stands for plural, the second for dual and the third for gender. The type distribution of the sample was as follows:

Type 000.....	6 languages
Type 001.....	0 languages
Type 010.....	1 language
Type 011.....	0 languages
Type 100.....	178 languages
Type 101.....	42 languages
Type 110.....	40 languages
Type 111.....	8 languages

The extension of the above distinctions on different persons served to establish subtypes. This extension has been indicated by means of exponents, writing the numbers 1, 2 and 3, to indicate first, second and third person, respectively; the letters "i" and "e" to refer to the distinction inclusive / exclusive; and, when it was necessary the letters "s", "d" and "p" to specify the number of the person in question. In this way 35 subtypes were identified in the sample, of which the following 7 were the most frequent:

Subtype 1 ^l 2300.....	108 languages
Subtype 1 ⁱ e2300.....	40 languages
Subtype 1 ^l 2301 ³	22 languages
Subtype 1 ⁱ e2301 ³	14 languages
Subtype 1 ^l 200.....	13 languages
Subtype 1 ⁱ e231 ⁱ e230....	10 languages
Subtype 1 ^l 231 ⁱ 230.....	8 languages

So far, the analysis of these data permit the extraction of the following conclusions:

1. Forchheimer's observation that number develops from first person to third person, whereas gender develops from third person to first person, is corroborated.
2. There is not a single language in the sample that has gender in its pronominal system without having number. That is the reason why the type 001 is empty.
3. If the features inclusive / exclusive and gender coexist in a pronominal system, the latter is always limited to the third person. This conclusion is illustrated by the fourth subtype listed.
4. If in the dual only one of the members of the inclusive / exclusive pair is present, it is always the inclusive one. An example of this kind is the last subtype listed.

Further analysis of the typological data, as well as the establishment of the territorial distribution of these types are in process and results will be available soon.

SEMER DANS LE VENT: UNE POESIE DE FEMMES EN VOIE DE DISPARITION

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Notre étude porte sur le saf, une poésie chantée par les femmes en Afrique du Nord et dont on trouve des variantes dans certaines régions du Maroc et de l'Algérie. Or, pour les fins de notre article, nous nous limiterons à la forme de cette poésie chantée par les femmes, en arabe dialectal, dans la région des Béni Khaled, confédération de tribus à dominance arabophone, située à la frontière marocco-algérienne.

Récemment, le même corpus qui a servi, il y a quelques années pour une étude sémio-linguistique, a fait l'objet d'une étude lexicologique. Il s'agit d'une contribution à la création d'un dictionnaire de l'arabe dialectal, parlé dans la même région. Ce travail témoigne de la perte progressive de ce genre de poésie chantée, comme le signale l'auteure du mémoire (1992:1). Quand quelques unes des informatrices ont été sollicitées à nouveau pour comparer les données, il s'est avéré qu'elles avaient oublié plusieurs couplets et qu'elles avaient souvent du mal à reconnaître les textes fournis par elles-même, dix ans plus tôt. Ainsi, dans l'espace d'une dizaine d'années, une grande partie du répertoire s'est perdue.

Avant d'examiner comment le saf a évolué, nous nous proposons de voir brièvement ses caractéristiques ainsi que les facteurs externes qui ont contribué à sa métamorphose. Par ailleurs, nous devons souligner que nous nous limiterons au seul texte verbal, sans nous occuper du gestuel qui l'accompagne. Ceci pour des raisons d'ordre pratique, même si certains sémiologues considèrent que séparer la poésie de la musique et la danse qui l'accompagnent normalement peut nuire à l'étude de ce genre.

A l'exception de quelques études effectuées dans le cadre universitaire, très peu de choses ont été écrites sur le saf. Maazouzi (1990:44) est l'un des rares auteurs à l'avoir évoqué dans un ouvrage récent, il écrit ce qui suit: "...la danse dite çaff, danse (chorégraphique) chantée par les femmes au Djebel Amour et au Ksel et spécialement dans les cérémonies nuptiales (cette danse comprend trois figures...)"; elle se distingue "de la danse alawi, qui est une danse chorégraphique d'hommes de la région oranaise.."

La sauvegarde de ce genre de poésie s'avère plutôt difficile à cause de ses caractéristiques. Ainsi les cinq opérations dégagées par Zumthor

(1984:40), à savoir la production, la transmission, la réception, la conservation et la répétition, et qui constituent l'histoire de toute oeuvre, peuvent nous être utiles. Si l'on examine le saf à leur lumière, on peut déduire qu'il a connu des modifications très importantes depuis quelques décennies.

Généralement cette poésie était improvisée pendant les rites de passage comme les cérémonies de mariage, les baptêmes, les circoncisions, les fêtes religieuses et pendant certains travaux manuels, comme le souligne Ouary (1972:25):

" Lors des fêtes où l'on danse, le petit groupe des animatrices, sur des airs déjà connus ou improvisés sur le champ, composent les paroles des couplets. Cela revient surtout à l'une d'elles réputée pour avoir le don, ce qui lui vaut l'appellation de celle qui apporte la semence." Tant que le mode de vie traditionnel persistait, la production semblait avoir été active. Mais actuellement, les situations de production se font rares: certaines activités traditionnelles comme le tissage et les cérémonies familiales qui regroupaient toute la communauté sont en voie de disparition, et avec elles la poésie les accompagnant.

La conservation du saf dont la production était étroitement liée au contexte s'avère encore plus difficile à cause de la quantité de tous les textes qui pouvaient être improvisés. Actuellement, il n'existe pas de textes fixes auxquels on peut se référer, mais seulement un schéma sous forme de couplets se composant de deux vers ou de deux phrases mélodiques qui laissent une marge considérable à la création personnelle de chaque chanteuse. Pourtant, cette structure simple a contribué pendant longtemps à faciliter la mémorisation et la conservation du saf.

D'autre part, la transmission de ce genre de poésie se faisait de manière spontanée: l'apprentissage prenait la forme d'un jeu. Il s'agissait effectivement d'une activité ludique; les semeuses invitaient leurs paires dans ces termes: " venez jouer au saf." Mais le caractère improvisé et spontané, exposait la transmission orale à des déformations beaucoup plus importantes que l'écrit. La mémoire collective conservait côté à côté des variantes multiples, ce qui a été considéré pendant longtemps comme un défaut majeur de l'oralité. Notons que les chercheurs ont commencé à considérer les variantes comme un principe constitutif de l'oral, seulement depuis quelques années. Selon L.J. Calvet, les variantes d'un texte ne sont pas des trahisons mais elles s'inscrivent dans le style oral et facilitent la mémorisation. Il n'empêche que l'existence de ces variantes due à la façon dont le texte se transmet, rend difficile sa conservation.

Les auteures de la poésie ou "semeuses" étaient généralement, nombreuses dans le même contexte. Chaque femme qui se sentait inspirée, apportait son couplet et exposait ses griefs. Une fois le texte produit, il était repris par d'autres femmes; il devenait l'apanage de toute la communauté. Il pouvait être modifié aussi selon les contextes, d'où l'existence de nombreuses variantes du même texte. Cette pluralité d'auteures et de contextes, avec les nombreuses variantes qui en résultent, a pour effet de rendre précaire la conservation du saf.

Certes, les improvisatrices étaient nombreuses, mais l'une d'elles pouvait assumer plusieurs rôles à la fois. Les femmes changeaient de rôles pendant la même cérémonie tout en échangeant leurs poèmes. En effet, le saf était un espace ouvert où les femmes pouvaient, également, rivaliser. Participer au saf était considéré presque au même titre qu'un devoir sacré, comme en témoigne ces couplets:

- * Au nom de Dieu, au nom de Dieu
- Le chant est recommandé par Dieu
- * Avancez ici ô filles raffinées
- Arrêtez de nous regarder

La participation était l'essence même du saf. Elle enrichissait la production et lui permettait de continuer à vivre sous sa forme traditionnelle.

Au premier abord, certains phénomènes tels que le colonialisme, l'émigration et l'urbanisation qui ont touché la communauté, semblent avoir eu un impact plutôt négatif sur le saf. Pourtant, nous ne pouvons pas ignorer qu'ils ont contribué à enrichir sa thématique. Le saf a connu un certain regain avec la guerre d'Algérie; il a été promu chant d'action en faisant ressortir l'injustice et le caractère intolérable de ce qui fait l'essence même d'une situation coloniale. Le couplet qui suit est un témoignage du statut du saf à cette époque:

- * Toi, tu milites et moi, je chante
- Nous nous retrouverons à l'indépendance

Cependant, au lendemain de l'indépendance, un mouvement de rejet s'est manifesté à l'égard de la tradition; tout ce qui venait de la campagne était vécu comme dévalorisant. Ce phénomène a eu des conséquences immédiates sur le statut du saf. Celui-ci s'est cantonné dans la campagne et une nouvelle dichotomie est née. On a commencé à distinguer: la poésie de la campagne - celle des femmes- de la poésie citadine - celle des hommes. Les facteurs "espace" et "sexe" ont contribué petit à petit à marginaliser ce genre de poésie, qu'on appelle péjorativement, rnansa "le chant des femmes", ou laaroubi "le chant de la campagne".

Ainsi, avant de connaître les changements actuels, le saf assumait différentes fonctions dans la communauté qui le produisait. Outre la fonction de divertissement et de communion, le saf enregistrait tout ce qui touchait la communauté. Bien que de manière latente, il faisait le récit des cérémonies qu'il accompagnait. Schématiquement, il se présentait comme un long poème composé de trois grandes parties qui épousaient la structure de la cérémonie et se subdivisaient comme suit:

- la première partie est une invitation à la participation et à la réjouissance. Elle commence par la "basmala": "formule sacrée, répétée par les musulmans au début de toutes leurs actions." (voir le 1er couplet cité)
- La deuxième partie est la plus longue. Elle est constituée de deux types de chants: certains sont étroitement liés à la cérémonie et coïncident avec les différentes étapes de celle-ci, et d'autres dont les sujets sont variés.
- La troisième partie est celle des adieux, elle annonce la fin de la cérémonie. Le thème qui domine est celui de la séparation.

Le saf a commencé à changer sur le plan de l'expression. Mais c'est dans le lexique que les différences sont les plus nettes. L'un des aspects les plus marquants est la fréquence importante des emprunts à d'autres parlers. Certaines expressions propres à d'autres dialectes régionaux sont apparues dans le saf: par ex: l'interjection na:ri particulière aux dialectes de l'ouest se retrouve dans les textes les plus récents; elle remplace des expressions locales utilisées au profit de la mélodie. Certains emprunts sont faits à d'autres langues comme le français et l'espagnol: trisinti: "l'électricité", žžada:rmya: "les gendarmes" dduru: "el duro": monnaie espagnole, bien qu'ils doivent subir des distorsions supplémentaires pour s'adapter au rythme et à la mélodie: balžya: "la belgique" La métrique dans le saf a été également, touchée par le changement. Alors qu'elle était étroitement liée au contenu, elle est réduite à suivre la mesure. La rime tombait sur une partie du discours suivant les différents thèmes; quand les couplets portaient sur l'action, la rime tombait sur le verbe. Les pieds des vers variaient normalement entre 11 et 18 unités selon le contenu du couplet; dans les vers qui exprimaient l'exaltation ou l'émotion, le nombre de syllabes diminuait. Actuellement, nous avons relevé que seuls 40% des couplets respectaient la rime. Alors que le nombre des pieds est devenu arbitraire.

Mais, comme toute culture qui tend au repli sur soi et à la redondance, le saf s'est refoulé pendant quelques années avant de ressurgir et de reprendre racine. Actuellement, certains couplets du saf se sont transformés en expressions figées comme le dicton ou le proverbe, d'autres ont intégré la devinette. D'autres, encore, se sont fondus dans le Ray, un genre de chant, d'origine inconnue qui a été pendant longtemps marginalisé à cause de sa thématique érotique et qui est devenu très populaire auprès des jeunes dans le Maghreb et en Europe, depuis une décennie.

En somme, il ressort de ce parcours que parmi les cinq opérations répertoriées par Zumthor: seule la quatrième opération, à savoir la répétition, semble se maintenir tel quel. La production a beaucoup diminué de point de vue quantité; la transmission a changé de procédé, elle se fait par apprentissage chez les chanteuses professionnelles; celles-ci ayant pris la place des semeuses qui apprenaient spontanément pendant des cérémonies familiales. Quant à la réception, elle se fait par le biais des ondes et par conséquent elle oblige à l'écoute et à la passivité. La conservation, à son tour, commence à changer de support; l'écrit et l'audio-visuel ayant remplacé la mémoire collective. Il semble que le saf a connu un regain avant de changer de statut et de se confondre avec d'autres genres.

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PERSPECTIVES ON UTO-AZTECAN COMPOUNDS

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1. INTRODUCTION

1.1 Composition

In this paper, I will take up a theme briefly mentioned by Whorf in his 1935 article on "The comparative linguistics of Uto-Aztecán": "The theory that is suggested by the phonetic forms of the very numerous dissyllabic stems, . . . , namely that the longer stems are complexes of units which occur simple or at least as simpler complexes in the short stems, is borne out by semantic analysis..." (605-6). Examination of what appear to be archaic compounds in Nahuatl led to the present comparative study of a number of different kinds of complex constructions that occur in both northern and southern languages, and that suggest possible characteristics of the proto-language including such features as classifying systems and unusual types of incorporations.

1.2 Characteristics of UA structure

In this analysis, the view taken of the morpheme structure to be reconstructed for proto-Uto-Aztecán (pUA) agrees in many ways with Whorf's 1935 description, with certain additions. Whorf reconstructs vowel length of up to three moras, including examples from Nahuatl. In their 1978 article, Campbell and Langacker reconstruct a number of long vowels from Nahuatl to pUA. However, it appears that pUA vowel length, if it can be reconstructed, was lost in Numic and the Southern languages. Although I am not yet sure of the relation of the Southern languages with Takic, Tübatulabal, and Hopi, there is good evidence to suggest that many, and I suspect almost all CV:CV roots in the Southern languages (SUA) derive from CVC[+resonant, -nasal]V roots before a following CV morpheme. These roots correspond to CVC[+stop]V and CVC[+resonant]V in Numic languages. Of all languages, it is in Nahuatl that this process appears to have been the most productive, but it is possible to see cases in Takic and SUA languages other than Nahuatl as well. Vowel length deriving from these sequences was subsequently lost in most languages. The details of the evolution of these long vowels is not the subject of this paper. However, what is important are the implications about the second morpheme in the CV:+CV stems. As Whorf had done, I began to wonder if many words that are considered to be formed from CV:CV morphemes, are actually old compounds or derived forms of CVC[+resonant, -nasal]V+CV. If this were the case, it should be possible to find cognates for the second elements.

2. PERSPECTIVE FROM NAUHALT

Working from the viewpoint of the historical development of Nahuatl, derivational patterns in that language as well as the occurrence of long vowels stirred an initial interest in the possibility that these -CV elements could be morphemes. At first, the idea of a greater number of such minimal morphemes seemed somewhat outrageous, especially given a certain shared belief among linguists in the dangers of overanalysis. On the other hand, one

question to be raised if these were found regarded their classification as root morphemes or suffixes. In other words, was the process one of two stages of lexicalization, in which a second root first was reanalyzed as a derivational suffix and then as a part of a longer single root, or did it seem likely that the morphemes were originally derivational, if one can say 'originally' in this context? Langacker (1978), for instance, has suggested that many affixes in Uto-Aztecian derive from more concrete elements. Could this be the case for the forms in Nahuatl?

An interesting unexpected result that came from looking at UA vocabulary this way was that a number of possible formal semantic classes emerged when terms were grouped according to these second elements. Some of these patterns are seen in 2.1. to 2.4., which deal with four possible pUA roots or affixes, that are shared in a number of vocabulary items.

2.1. -sa

Because it is found after long vowels in some cases and because there are cognates for the first CV- sequences in a number of others, it is possible tentatively to identify a morpheme -sa as a second morpheme in a number of Nahuatl verbs. Its probable meaning is 'to move away, out'. The first morpheme either is the location of origin of the action ('house', 'place'), or the instrument moved ('leg'). In some forms there is consonant harmony so that *-sa becomes -ča y -ča. It is very likely that the form -si seen in group (B) is a related morpheme, since these are intransitive verbs that have to do either with bodily secretions or sounds of one sort or another issued from the body. Here again consonant harmony would explain gahēi, where *-si becomes -či, and iyesi, where it becomes -ši after the palatal -y. The cases of ne:si and ahsi may be occurrences of an unrelated -si, but perhaps have it because of the appearance or arrival, or 'coming out' of the agent on the scene. A small number of other verbs that end in -sa and -si are not considered to contain the morpheme, for instance Nahuatl ik̥asi < *k̥asi 'to ripen, cook' and proto-Nahuatl *tisi < pUA *tusu / tusi 'to grind'.

2.1.1. Nahuatl verbs with -sa and -si

- (A) *ki:-sa > ki:-sa 'to go out, by' (pUA *kii 'house'); *tañ-sa > tañ-sa 'to throw, abort' (pUA *taña 'to place'); *pu-sa > ih-sa 'to awake' (pUA *pu- 'face'(?)); *ka-sa > (ke)ke-sa, ik̥sa 'to kick' (*ka- 'foot' is probably the pUA root for 'foot', although forms with the *-s are found in many of the languages); so:-sa 'to cast the evil eye'; *či-ča (but cf. čiči 'to suck, nurse') 'to spit'; hi:-sa 'to defecate'.
- (B) *ki-ki-si 'to play a flute' (Voegelin, Voegelin and Hale (1962) (VVH) 122: *kusu 'to sound- of animal': Pap kuku; Tar kusú; Tüb ?ukus/ ku:s); *ka-ka-si 'to cough'; ye-si 'to expel gas'; eah-či 'to cry out'; ne:-si 'to appear'; ah-si 'to arrive'.

2.1.2. Nahuatl *-sa words with additional derivation

A number of other verbs that carry one of the additional derivational suffixes *-(li)-wa or *-ni may have *-sa, which becomes -ša:

- (C) pišowa 'to sow, scattering the seeds'; popošowa 'to become loose (soil, etc.)'; ek̥towa 'to sneeze'; iz-kašowa 'hit in the eye' (< *pu-sa-li- 'eye' + ka-sa 'to kick' + -li- + wa).

2.1.3. Nouns

It may be that some nouns are also derived from these old complex forms, as in (D):

- (D) pN *ik̥si < *ka-sa-li-t < pUA *kasi 'leg, foot'; pN *i:či < *hi-sa-li-t < pUA *pu-si 'eye, face'

2.1.4. UA cognates for *-sa

*-sa does not seem to occur independently in any language, so it may not have been a root, but only a derivational morpheme for deriving verbs from nouns.

- (E) Possible cognates: *kwiš+si 'to take, get': Pap bibis; Hp kwiši; Hch kve-; Tar wi; Tüb wiš-; S.P. kwi-; Com kwili-; Yq pwiš-; *-sa; Ls šaňa- 'to defecate'.

2.2. *-mi 'to move (without specifying direction)'

2.2.1. Nahuatl Forms

A second possible pUA CV root is *-mi. Examples of intransitive Nahuatl verbs that end in -mi all seem to share the meaning 'to go around' as seen in (F).

(F) a-mi 'to hunt' (cf. ahsi 'to arrive'; gna 'to take hold of'); ne-mi 'to live'; nehnemi 'to walk around'; si-mi 'to go' (only in simowaya:n 'place where one goes, one of the Mexica homes of the dead'). Two other Nahuatl cases, *ke:-mi 'to dress' and *xa-mi 'to end' are questionable.

2.2.2. Nahuatl *-mi words with additional derivation

Under (G) are verbs that carry the additional derivational suffixes *(li)-wa (the *-li drops in specified conditions). It seems probable, for example, that te:mowa 'to look for' is derived from pUA *tiwi 'to see' and *mi 'to go around looking'. Other Nahuatl forms with te: from pUA *tiwi include te:-miki 'to dream' and te:-s-ka- 'mirror'.

(G) te-mo (< *temi-(li)wa) 'to go down'; sakamowa 'to till' (cf. saka- 'stubble'); te:-mo-wa 'to search, look for'.

2.2.3. UA cognates for *-mi

As far as other Uto-Aztecán languages, there are two verbs that are common, the reflexes of pUA *simi and *numi and the cognates of Nahuatl simowayan and nemi. In a number of languages, including Cora (Verónica Vázquez, personal communication) and O'odham (Papago), compounds are formed with reflexes of *simi; in Nahuatl somewhat similarly nemi is one of several aspectual series verbs. The use of -mi as a morpheme that may have been more productive appears to have been limited to Nahuatl.

2.3. *-ki 'to sease, feel'

A third possible old morpheme that appears in compounds is -ki. There appear to be at least two -ki, one associated with verbs for cognitive states, as seen under (H), and another that is more of an instrumental, as seen in the terms under (I). In relation to the first, Whorf notes "For instance throughout the daughter tongues, the verb 'die' (usually < UA *mu-ki, but in S.P. yañai-) is used as second member of a compound with an entirely different meaning, that of feeling a sensation or being in a certain bodily state:..." (Whorf 1935, 605). It may be that the set with 'to die' described by Whorf is a subset of a number of verbs as seen in the Nahuatl examples under (H)

2.3.1. Nahuatl verbs *-ki

(H) ne-ki 'to want'; ka-ki 'to ear' (cf. pUA *naka- 'ear'); mi-ki 'to die'; elinkowa (< *eli-miki-(li)-wa) 'to become stuffed'; te:-mi-ki 'to dream'; apis-mi-ki 'to be hundry'; a-mi-ki 'to be thirsty'; pa-ki 'to be happy'; piki 'to invent; to lie'; possibly also na-miki 'to meet' and na(:)nkiliya 'to answer'.

2.3.2. Exceptions

As mentioned, in a number of other verbs, a -ki seems to be instrumental.

(I) te-ki 'to cut' (?< *ti 'rock' + *ki); ci-ki 'to scrape' (?< *ci 'sharp pointed instrument' + *ki); ci-ki-mo-li-n 'chismero (kind of woodpecker with a sharp, rasping song)'

2.3.3. UA cognates for *-ki

2.4. *na?i 'to burn' (VVH 95b *na?i)

The final possible root morpheme to be discussed is that for 'to burn'. This root is an independent verb in a number of languages, including Numic, Hopi, Cahuilla, and Yaqui/Mayo. It must be distinguished from a root pUA *na 'to spread across or out' that is polysemous with it in languages that have lost the *n / *n contrast in initial position. The verbal *na?i contrasts with the UA noun root for 'fire' *tahi.

In my searches up until now, no compounds with *na?i have been identified outside of Nahuatl, but this language does have a number of interesting forms, some of which refer directly to burning with flames, but many of which refer to illnesses of different kinds, and

which in turn relate both to the physical fever which accompanies many illnesses, and perhaps to the cultural importance of hot/cold theories about well-being at least in Mesoamerica (cf. López Austin: 1984). Also Ute, for example, has naay- 'be angry'. It could be that the existence of the terms formed with a root for 'to burn' may be evidence for the pre-contact existence of the hot/cold theory in the Americas.

2.4.1. Nahuatl verbs with *-na?i

(J) *ci-na-(li)wa > činawi 'to burn (fields)'; *tapi 'sun' + -nah > to:na 'to shine, be warm' (Dayley (1989:120) gives Panamint tapenah 'to shine, be light' as derived with an auxilliary verb nah, instead of 'to burn').

2.4.2. Nahuatl *-na words with additional derivation

kwil-ta-no-wa 'to enjoy, enrich' < *kwir-'? + *tapi 'sun' + *nañ 'to burn' + *(-li)-wg; *tipi-na(-li)-wa > čipinowa 'for the mother to make a child sick by becoming pregnant again quickly'; *tahi-nañ(-li)-wa > Xanawi 'to be very sick'; eikwnowa 'to have the hiccups'; toto:niya 'for the sun to heat something'; tena 'to groan, complain (sick person)'; to:newa 'to suffer pain'.

2.4.3. Nahuatl nouns with *-na?i

There are at least three noun stems as well that appear to be formed from the root for 'to burn', two for fire-related objects, and one for a mark of illness:

nes- 'ashes' (cf. Mayo na-po-sa); tenamas-/temanas- 'three stones on which comal is placed over coals'; nanawa- 'swollen gland; sore'.

3. CONCLUSION

Although the substance of this paper were details of Uto-Aztecán and especially the pre-Nahuatl etymologies, somewhat more general conclusions may be drawn, if the analyses are correct. The details have revealed some aspects of the semantic and lexical structures of the languages that in turn, suggest reconstructions of various aspects of the world view that may have lain behind the creation of such concepts, among them bodily function, cognition and illness, by the Uto-Aztecán peoples.

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POETIQUE CONTRE PEAU ETIQUE
SEMILOGIE DE NOMS DE PRODUITS COSMETIQUES

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Parmi les phénomènes linguistiques que produit la société de consommation, le signifiant affecté à une marchandise constitue la face visible d'un processus de création lexicale. Dans le cadre de ce travail, on a choisi d'étudier les particularités du lexique des produits cosmétiques, et plus particulièrement la désignation de produits de soin de la peau. Le corpus est constitué des énoncés figurant sur le conditionnement d'articles en vente de 1989 à 1992, en Belgique et en France.

Bon nombre d'éléments des langues anciennes interviennent dans la création de nouveaux composés, à l'instar de ce qui se produit pour la terminologie technique et scientifique. Le recours à ce procédé de composition allogène s'explique principalement par sa capacité à créer des formes à l'allure scientifique, propres à séduire le consommateur potentiel. Ainsi, les éléments de mots composés savants tels que *bio-*, *hydro-*, *dermo-*, président à la formation de nombreux composés hybrides grec-français ou latin-français. Les unités forgées de la sorte présentent des caractéristiques formelles intéressantes à décrire.

Tout d'abord, on constate une relative autonomie conquise par l'élément savant. Les items les plus caractéristiques à cet égard sont *phyto 7*, *hydra +*, ou *micro 2000*. Dans ces dénominations de produit, l'élément de composition est utilisé pour son propre compte. *Thermo-vital*, *aqua-tendre*, ou *hydra-bleu* présentent également une forme particulièrement libre de composition allogène. On peut dire que le croisement de l'élément savant avec l'élément français conduit à la formation d'une unité plus significative sur le plan stylistique que dénotatif. Ainsi, que penser de la cohésion sémantique de *dermo skis*, dénomination au caractère hybride extrême ?

Le caractère peu coalescent de ces unités est traduit sur le plan orthographique. En effet, le trait d'union ou l'espacement marquent souvent une césure entre les éléments ainsi attelés, comme cela apparaît dans les

exemples suivants : *bio-cils, bio-raalentisseur d'âge, cryo-restructurel, hydra-bleu, hydra-futur, oligo-hydratation, phyto-hâle, phyto restauratrice, séro-collagène, synchro-sérum*. Ainsi, ces composés non intégrés se présentent davantage comme des lexies composées que comme des mots formés par composition, ce qui réaffirme la relative autonomie de l'élément grec. On relève néanmoins certains cas où l'intégration des composés est réalisée graphiquement, comme dans *bionutritive, chronosvelt, liporéducteur, microémulsion, phytobuste*.

Bio-, hydro- et micro- sont sans conteste les champions de ce type de formation morphologique. L'élément *bio-* a engendré divers mots, parmi lesquels les redondants *biovégétaux, bio-marins, ou biopeptidiques*. On relève aussi pêle-mêle *bio-gommage, bio effet, bio-performance, bioperfection, bio-disponibilité, bio-capsules, bio-raalentisseur d'âge*. L'élément *micro-*, quant à lui, innove avec la crème *micro-aérée, les micro-sphérules, et autres micro-gel, micro masque, micro-ciblé, micro-perles, microémulsion*.

Une des autres caractéristiques morphologiques marquantes des items relevés dans ce corpus est le foisonnement d'unités préfixées. Le champ préfixal *anti-* se voit augmenté de nombreux dérivés dans lesquels *anti-* réalise l'opposition de contrariété : *anti-âge, anti-temps, anti-fatigue, anti-rondeurs, anti(-)rides, anti(-)cernes, anti-capitons, anti(-)vieillissement, anti-dessèchement, anti-stress*. Signalons que le caractère néologique que présentent la plupart de ces dérivés est attesté par un certain flottement dans l'orthographe. Ainsi, il arrive là-aussi qu'un trait d'union, normalement inutile dans la forme préfixée, marque une césure entre l'affixe et la base.

L'inventaire des formes préfixées révèle par ailleurs un nombre considérable de dérivés formés sur des affixes multiplicateurs ou superlatifs. *Multi-* multiplie ses occurrences, avec *multi-tenseur, multi-normalisant, multi-réductrice, multi-réparateur*, ou encore l'étrange concept de *multi-minceur*. L'adjectif *actif/ve* est l'enjeu d'une surenchère préfixale dans la série *suractif, bi-actif, multi-actif, ultra-active*. Les superlatifs mènent une dure concurrence : des substances *super-protectrices, super-hydratantes, hyper-hydratantes, ultra-protectrices ou ultra-génératrices* veillent sur les pauvres peaux *ultra-sèches...* N'omettons pas la crème *Ultra Sport*, qui rivalise avec la concurrente *Mégadose, d'Ultima II*. Et en fin de compte, même les peaux *extra-sensibles* trouvent leur bonheur avec les pommades *ultra-légères*, les savons *surgras* et les produits *hypoallergéniques*. Une telle "escalade préfixale" traduit un langage marqué à l'extrême par les impératifs de la persuasion.

D'autres procédés de structuration du lexique contribuent à créer des dénominations de nature à convaincre le consommateur en quête de produits cosmétiques efficaces. On relève, à cet égard, un premier ensemble de dérivés suffixaux en *-ium*, suffixe caractéristique du lexique de la

nomenclature des éléments chimiques. Ce qui frappe, ici, est l'extension de son emploi. *-ium* est accolé à des bases tout-à-fait inattendues, comme c'est le cas dans *régénium* ou *déridium*, dérivés formés sur une base verbale et non nominale. *Déridium* et *Régénium* connotent plus qu'ils ne signifient, et constituent un bel exemple d'utilisation détournée d'un suffixe pourtant réservé à la construction de termes scientifiques. Basées sur le même modèle morphologique, on trouve d'autre part *énergésium* et *génésium*, qui désignent une substance, protégée par une marque déposée, entrant dans la composition de certains produits de beauté. En l'occurrence, ces calques de construction semblent davantage motivés que dans les cas précédents. Il y a ici non seulement un parallélisme de construction, mais aussi une analogie sémantique. Le sens induit par le suffixe *-ium* est respecté bien qu'étendu. *Génésium* et *énergésium* désignent des notions plus complexes que celle du seul élément chimique, mais s'inscrivent néanmoins dans le même champ sémantique. Il n'en va pas de même pour les items *actium* et *scrinium*, dénominations de pommades dont l'éventuelle motivation référentielle reste énigmatique. Il semble là qu'importe plutôt le jeu sur la forme, favorisant l'émergence d'un halo de connotations scientifiques.

D'autres suffixes conduisent à des créations originales. Ainsi, on note une forte préférence pour les finales *-ance/-ence*, très certainement en raison de leur valeur stylistique. On rencontre ainsi *clariance*, *cosmence*, *équaliance*, *imanance*, *linéance*, *prévenance* et *sculptance*. *Imanance* comporte en outre la particularité d'être un allographe homophone du concept philosophique *immanence*, ressemblance phonétique à valeur évocatrice. Quant à *prévenance*, il s'impose non pas comme néologisme formel, mais plutôt comme néologisme sémantique. Ce produit étant décrit comme "prévenant les effets du vieillissement cutané", il s'agit d'entendre *prévenance* non plus dans son acceptation commune, mais au même titre que *prévention*.

Par ailleurs, on notera plutôt comme phénomènes isolés les finales en *-alia/-elia*, apparaissant dans *aubelia* et *temporalia*, et les terminaisons en *-ix*, de *nutrix* et *transhydrix*.

Enfin, on soulignera l'occurrence de *issima* comme nom de produit. Les valeurs superlatives de *-issime* ont ici conquis une indépendance formelle, ce qui constitue un fait particulier d'autonomie d'un suffixe.

Comme formes propices aux connotations scientifiques, s'imposent également les abréviations. Le mécanisme acronymique conduit à la production d'énoncés littéralement cryptés. En effet, rares sont les ensembles lettriques dont la motivation est explicitée comme dans *Prévénance au C.P.F.*, C.P.F. pour *collagen protective factor*. Dans la majorité des cas, au contraire, l'unité syntagmatique à l'origine de l'acronyme est inconnue. C'est ainsi que *PPM*, *concept tissulaire A*, *skin life*

T.P.A. ou *revitaliseur intensif LTC-LC* gardent leur secret, linguistique s'entend. Quant aux systèmes *HGC* ou *SPE*, n'en parlons pas... A côté des abréviations alphabétiques, on rencontre des abréviations de type chiffré comme *B 21* ou *MP 24*, à la signification tout aussi obscure. Occasionnellement, des symboles mathématiques s'y ajoutent, comme dans *PA24+*, *jour +* ou *hydra +*. Pour la plupart, les acronymes contribuent à engendrer chez le lecteur une impression de haute technicité.

Toujours sur le plan de la structuration du lexique, on remarque une abondante production de mots-valise. Il s'agit, rappelons-le, de l'amalgame de plusieurs mots conduisant à une forme unique, par accumulation des composants, et éventuellement réduction morpho-phonologique. Certains mots-valise sont forgés au départ du n'un nom propre, le nom de la marque, et d'un autre mot : *Liéractiv* vient de la marque *Liérac*, *lumilane d'Orlane*, *galbéor* est la réduction de *Décléor* et de *galbe*, et *thalgomarine* tronque la marque *ThalgoCosmetics*. Dans d'autres cas, le mot-valise allie des mots de langues différentes, comme dans *aquasérum* ou *eyesérum*, où l'accent aigu ostensible de *sérum* exclut de le prendre pour le mot latin ou anglais.

En outre, un même mot peut donner lieu à différents mots-valise, et on peut dès lors dégager des ensembles, qu'à défaut d'appeler paradigmes nous nommerons séries. Une série s'est construite sur *arôme*, soit comme premier composant comme dans *aromessences*, soit comme second composant dans *alguaromes*, *circularome* et *dermarome*. On relève aussi la famille *derm* : *ecladerm*, *esthéderm*, *stimuderm*, *subliderme*, *repariderm*, *toniderm*, et le très redondant *dermaderm*. Mais le phénomène sans conteste le plus intéressant est la série à laquelle ont donné naissance les incontournables *liposomes*, véritables monuments de la cosmétologie moderne. Sur base de *liposome*, *Lancôme* a crée *noctosome* et *niosome*, deux dénominations qui, en outre, riment avec *Lancôme*. D'autres marques participent au mouvement général, et on collectionne ainsi *fortisome*, *liftosome*, *microsome*, *phytosome*, *plurisome*, *skinozome* et *thymosomine*. Une autre série s'est édifiée sur base du terme *élastine*. *Elastine* a fourni *dermastine*, *élastifine*, *germastine*, *hydrolastine* et *hydranoctine*. On terminera l'illustration de ce type de construction très fertile en citant pêle-mêle divers items qui émaillent le corpus. Les crèmes *draino-paupières*, *nutri-intense*, les soins *nutri-réparateurs*, les complexes *séro-collagène* ou *séro-botanique*, exemples dans lesquels le trait d'union est une fois encore présent, comme pour témoigner de la fragilité de l'alliance des termes. On trouve aussi les *biocollaspères*, où *colla* est le moignon de *collagène*, ou encore les *sublicrème*, *bronzécran*, *efficure*, *irilys*, *phytojoba*, etc.

En définitive, il ressort que le lexique de la beauté présente des caractéristiques morphologiques et stylistiques particulièrement intéressantes.

NONVERBAL COMMUNICATION IN ITALY

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The communicative approach in foreign language teaching has focused on the linguistic, paralinguistic and extralinguistic aspects of communicative competence: in this context gestures in Italy play an important role, as part of the extralinguistic competence of native and non native speakers.

1. THE RECENT PAST

The particular development of Italian as a national language, both written and spoken, is relatively recent: its first written use dates back to the 13th century, but only about 150 years ago it started to be also spoken by an increasing number of Italians who previously used their own local dialects. This means that also the relationship between verbal and nonverbal communication, referred to standard Italian, is recent and not very much investigated. As to the past, the use of gestures with a specific meaning is proved by their pictorial representation since the ancient history: the gesture of horizontal "horns" (as a sign of ill omen or menace), for example, is attested in Roman wall paintings in Pompei (I century a.C.), while vertical "horns" (as protection) are even more ancient and are to be seen in Etruscan wall paintings in Tarquinia (520 b.C.) (see Morris: 1979). More recently, an important essay written at the beginning of the last century (De Jorio: 1832) makes the point on Neapolitan gestures and on their role in face to face interaction.

2. CONTEMPORARY TRENDS

Various features of the present linguistic situation in Italy are influencing spoken and written Italian, as well as the typical Italian gestures that accompany oral communication: the diffusion of modern mass media, the more and more frequent contacts among people with different languages and cultures, the average higher level of education, the progressive loss of the active use of dialects. In particular, during the last decades many regional gestures have spread all over Italy (at least at passive competence level), others have restricted to limited areas in connection with the use of the local dialect, others of foreign origin have been integrated as active components in modern "average Italian". The analysis of Italian nonverbal communication, as it emerges from contemporary films, TV programmes, newspapers and magazines, commercials and literature, shows such trends, that seem to confirm similar trends of contemporary standard Italian.

2.1. Diffusion of regional gestures

Certain regional gestures have become part of the national (at least passive) competence of native speakers, like the various kinds of "horns" (as an insult, for protection against evil omen, or indicating that someone is a cuckold) which are particularly common in southern Italy but are also recognized and used in the rest of the country. Other gestures are typical of all Italian regions and, on the contrary, are completely absent in the rest of Europe, like the hand with tightened finger-tips, used to stress an interrogation.

2.2. Restriction of regional gestures

In other cases regional gestures are limited to certain areas, in combination with the use of the local dialect: this is the case of the head raised backwards as a denial (a gesture used only in Naples and southern Italy), and of certain sexual insults (like the sign of thumb up in Sardinia and Sicily).

2.3. Diffusion of foreign gestures

Recently, various foreign gestures have spread all over Italy. The most popular is probably the sign of thumb up meaning "OK", which was first introduced by American soldiers during the II World War and is now very popular in Italy both at passive and active competence level, constantly reinforced by its presence in the frequent American films broadcast by Italian TV networks. Another foreign gesture generally recognized or used in Italy at present is the sign of "V" for "victory" (first used by Churchill), while its most ancient meaning of sexual insult, very common in Ireland and Great Britain, is only present in certain parts of southern Italy.

3. NONVERBAL COMMUNICATION IN ITALIAN MASS MEDIA AND NARRATIVE LITERATURE

A direct proof of such observations on current trends in Italian nonverbal behaviour can be found in recent Italian films, newspapers, commercials and narrative literature. Mass media in particular are often considered as a mirror and a model for language uses and trends, and this is true both for verbal and nonverbal aspects of communication. Therefore our investigation will now take into account the results of a preliminary survey done on a selection of materials, in order to identify the most common gestures used (in visual texts, like films or pictures) or referred to (in written texts, like articles or novels).

3.1. Mass media

TV and written commercials show a limited range of gestures used as part of the message: generally they are clear and widespread gestures for approval (thumb up, forefinger and thumb producing a ring) or secret agreement (wink, forefinger in front of the mouth), but recently even some insulting ones have appeared (tongue out, hand on forearm).

In newspapers, gestures with clear communicative functions are often present in pictures of famous people, and journalists also refer to them in their articles, generally without explaining their meaning, as it is assumed that they should be well known to the public.

3.2. Cinema

Cinema is most significant area for gesture investigation. From the analysis of eleven Italian films produced during the 80's and chosen among the various examples of the so-called "commedia all'italiana", the presence of specific Italian gestures has been observed in particular in those films directed and interpreted by central and southern Italians. This fact confirms the geographical distribution of body language, generally more rich in

southern Italy and progressively less developed going towards the northern part of the country. Moreover, the gesture most frequently used was the typical hand movement to stress interrogations.

3.3. Narrative literature

Also, it is interesting to investigate how Italian writers represent the nonverbal elements referred to the characters, not only as a contribution to focus the documentary realism of the narrative text, but also as a source of information about the gestural behaviour of the social environment of the author. In our research of most common Italian contemporary gestures, we have analysed various novels of contemporary authors, observing, like in the case of films, a clear predominance of such nonverbal elements in central and southern-italian authors (Moravia, Cassola, etc), in comparison with northern Italian authors (Ginzburg, Pavese etc). Such gestural descriptions are introduced according to "the four ways in which the author usually transmits the nonverbal behaviour through the narrative text" (Poyatos: 309):
 a) by describing the behaviour and explaining its meaning (1);
 b) by describing the behaviour without explaining the meaning (2);
 c) by explaining the meaning without describing the behaviour (3);
 d) by providing a verbal expression always concurrent with the nonverbal one (4).

4. GESTURES AND SPEECH ACTS

If we consider gestures as a component of face to face interaction, we shall notice that in Italy there is a number of particular body movements generally used or recognized as expressing specific speech acts: in most part of Italy, for example, the chin touched one or more times with the back of the hand conveys the same message as the words "I don't care", words that can be accompanied or replaced by the gesture itself. Considering contemporary Italian body language, as it emerges from mass media and narrative literature, we have selected 100 gestures expressing specific speech acts and we have classified them according to the categories used in the "Threshold Level" for the main European languages (see Diadori: 1990):

- a) social conventions (e.g. greetings and congratulations: 13 gestures);
- b) emotions and feelings (e.g. satisfaction, fear, indifference, approval, disapproval, boredom: 23 gestures);
- c) actions (e.g. warning, threatening, indicating to go away, to come nearer, to be silent: 22 gestures);
- d) questions and answers (e.g. positive, negative, doubtful answers, stressed or imploring questions: 13 gestures);
- e) opinions (e.g. on someone's homosexuality, good luck, friendship, intelligence, madness: 15 gestures);
- f) descriptions (e.g. complete change, lies, damage, agreement, crowd, money: 10 gestures);
- g) insults (4 gestures).

5. PEDAGOGICAL IMPLICATIONS

The particularly rich Italian nonverbal component in face to face interaction has also a relevant pedagogical interest, especially referred to the teaching of Italian as a foreign language. But if we want to apply a revision of the concept of "linguistic fluency" in favor of "verbal-nonverbal fluency" (see Poyatos: ch. 1) in view of its implementation in foreign-language instruction, it will be necessary to focus on the developments of contemporary gestural behaviour within the language community. The aim of our research is therefore to develop a new taxonomy of Italian gestures,

based on contemporary visual and written materials, and deeply related with the analysis of the language and the teaching of communicative competence.

6. NOTES

- (1) The young Luigi runs to call the lift for him, in the hope of a tip. He does not receive it and, turning back with a grimace towards Oreste Nava, he rubs his thumb's end against his forefinger in order to express emphatically the mean avarice of the two men. (Fruttero, C., Lucentini, F., 1971, L'amante senza fissa dimora, Milano: Mondadori, translation mine).
- (2) Among the people who were going in and out, Guido stretched out his hand to her, continuing to talk to Rodriguez. (Pavese C., 1949, La bella estate, Torino: Einaudi, translation mine).
- (3) He looked at her while she was going away, he waved her good-by again, then he lit himself a cigarette. (Cassola, C., 1961, Un cuore arido, Torino: Einaudi, translation mine).
- (4) She went away, but before leaving she glanced at me as if she wanted to say "We understand each other, don't we?". (Moravia, A., 1954, L'infermiera. Racconti romani, Milano: Fratelli Fabbri Editori, translation mine).

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THE SOCIAL FUNCTIONS OF AMERICAN COLLEGE SLANG

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Slang usually provides an alternative vocabulary for referents that already have names in the language: *bank*, *bing*, *cabbage*, *d's*, *ducats*, *duckies*, and *fundage*, for instance, are American college slang equivalents for standard English *money*. Although slang cannot be distinguished from its standard synonyms by morphological form or by syntactic function, slang usually evokes connotations and social inferences not inspired by standard vocabulary for the same referent: *bow down to the porcelain god* is more picturesque and elicits less sympathy than does *vomit*. Slang enhances the social dimensions of language in a variety of ways. For example, slang can define group membership, reinforce cultural stereotypes, shift the register of discourse in the direction of informality, provide formulae to facilitate conversation among peers, poke fun at convention, defy taboo and authority, and deliberately impede communication--bringing about such effects singly, in combinations, or all at once. The social richness of slang makes this type of vocabulary particularly suitable for traditional American college students, who are often more uncomfortable negotiating the social intricacies of attaining higher education than with meeting its academic challenges.

For American college students the overarching purpose of slang is to confirm a sense of belonging. Sharing and maintaining a constantly changing in-group vocabulary aids group solidarity and serves to include and exclude members. In this respect, slang is the linguistic counterpart of fashion and serves much the same purpose. Although slang accomplishes its overall purpose in a number of ways, this paper focuses on only two subsets of vocabulary particularly evident in American college slang--judgments of approval and disapproval and terms that oppose authority.

The slang examples in this paper were reported as "good, current campus slang" by undergraduates at the University of North Carolina at Chapel Hill during academic years 1990-91 and 1991-92. About eighty-five percent of the 15,000 undergraduates at this major Southern public university are from North Carolina; about ten percent are African-Americans; almost all are between the ages of eighteen and twenty-three.

Slang provides college students with automatic linguistic responses for assigning others to either the in-crowd or the out-crowd. For example, someone whose dress, lifestyle, and concern for the environment are reminders of the 1960's is depicted in college slang as quaint and tolerable in a somewhat gentle set of labels that make reference by association: *crunchy (granola)*, *earth biscuit*, *earth muffin*, *granola*, *nut-n-berry*, *rice-n-beaner*, and *woodstock*

wannabe. Far more condemning is the large set of negative evaluative terms available at any time in college slang to allow users to make a value judgment without really taking a stand or expressing their feelings. During 1990-92, all of the following nouns categorized someone as not attuned to the prevailing style or priorities of UNC-CH student life: *butthead*, *cheddar*, *cheese*, *cheeseball*, *dork*, *dorkus pretentious*, *dweeb*, *geek*, *goob*, *goober*, *goombah*, *nerd*, *queen ween*, *un*, *wally*, *wannabe*, *zero*. By contrast, there is no list of nouns for someone who fits in just fine--perhaps confirming how precarious social assurance is in a college setting.

Favorable assessment is commonly expressed by adjectives rather than by nouns, implying that admirable qualities are non-essential and temporary rather than inherent and defining. Current adjectives that convey the judgment of good, attractive, or admirable are *awesome*, *booming*, *brilliant*, *chicalean*, *cool*, *fresh*, *happening*, and *sweet*. Others require an ironic interpretation to be construed as flattering: *bad*, *bitching*, *killer*. ("BMW is a bad/bitching/killer car.") It is interesting that the adjective *bitching* can have a positive meaning, yet the noun *bitch* remains negative only. Evaluative meanings tend to be generally positive (*sweet*) or generally negative (*cheezy*), with little possibility for fine discrimination. Thus a slang evaluative term can apply to a wide range of referents, like a *sweet foul shot*, a *sweet concert*, a *sweet grade*, or a *sweet BMW*. The lack of precision gives the slang user two choices only, positive vs. negative, thereby reducing the likelihood of arriving at a judgment different from that sanctioned by the group.

A set of group-favored vocabulary is also helpful in handling awkward social situations with peers, particularly pertaining to sex. Often humor is the device for masking discomfort in talking about subjects that have traditionally not been discussed casually in polite society. Referring to sexual intercourse flippantly as *bumping uglies*, *doing the big nasty*, *doing the naked pretzel*, *getting paid*, or *knocking boots* allows the speaker, at least in casual conversation among supposedly worldly-wise college students, to minimize the emotional commitment involved. The life-threatening AIDS epidemic has acquainted all college students with the condom and has quickly given rise to slang synonyms like *jimmy*, *jimmy hat*, *party hat*, *sheepskins*, and *raincoat*, which serve to distance the harsh realities that make the protective device a subject of public language. As the incidence and fear of rape on college campuses has increased, the term *rape* has been generalized to mean 'misuse; diminish the effects of; steal; defeat': "I just went to the mall and raped my VISA." "My dad phoned this morning and raped my buzz." "She raped my coat." "Michigan got raped by Duke in the NCAA final." The extension of the term *rape* to such contexts ameliorates the word and appears a denial on the part of college students of the seriousness of the crime.

Since medieval times students have developed vocabularies that picture themselves on the outs with the establishment and ally themselves with less respectable elements of society, like gamblers and drug users. The opposition to authority is rather playful and in predictable areas, obligatory and automatic rather than heartfelt--basically serving as another way for college students to acknowledge their common plight. In so doing, they have always borrowed from the language of subcultures. Today's American college slang borrows heavily from the language of Blacks, current examples including *cop a tude* 'act in an uncooperative or angry manner'; *dap* 'respect'; *fly girl* 'attractive female'; *front* 'pretend'; *ho* 'promiscuous female'; *home slice* 'friend'; *jam* 'have a good time'; *knock boots* 'have sex'; *phat* 'voluptuous'; and *word up* 'expression of approval'. On the surface these borrowings appear to depict a group of lower social status as appealing and worthy of imitation. Yet a closer

look shows that borrowings from Black vernacular are limited in range and are filtered by the stereotypes of Blacks held by mainstream society.

One target for student opposition is, of course, the academic system. Slang pictures students as embattled, as in an athletic contest or war--always on the verge of being destroyed, for example, *wasted* by a quiz. The term *school* itself in current UNC-CH slang means 'to dominate, to prevail, to do something better than the opposition so that they learn from you': "I really schooled you today in basketball." The beneficiary of *schooling* is humiliated. Interestingly, college slang does not appear to attribute humiliation in the educational process to individual members of the establishment, as the collection contains no slang terms for teachers, deans, librarians, or campus policemen.

Not surprisingly, slang terms for courses, grades, and buildings are numerous. Courses in Radio-Television-Motion Pictures are called *rumptyvump*. The grade A is an *ace*; C is a *hook*; D is a *dog*; F is a *flag*. A recent target for student linguistic creativity has been *Student Health Services*, which has been renamed as *Stupid Health Services*, *Shitty Health Services*, *Stupid Hell*, *Student Hell*, and *Student Death*.

Perhaps because excessive use of alcohol is both socially and legally unacceptable, getting drunk--or at least talking about it--is a favorite pastime among college students. Beer is the beverage of choice, and it is variously called *brew*, *brewski*, *brewdog*, *barley pop*, *icy pop*, and *cornflakes in a can*. People who frequent various bars *play bar golf* or *do batting practice*. A hazard of indulging in *bar hopping* is to *beer goggle* 'find someone attractive because of the influence of alcohol'. Slang terms for drunkenness from just the past two school years show great linguistic energy: *baked*, *blasted*, *blitzed*, *bombed*, *boohonged*, *caked*, *choked*, *crocked*, *subarred*, *golfed*, *gone*, *hammered*, *lit*, *loaded*, *out of control*, *plastered*, *polluted*, *pummeled*, *ripped*, *ripskated*, *rocked*, *slammed*, *sloshed*, *smashed*, *tanked*, *toasted*, *toe, tore up*, *trashed*, *wasted*, and *zooted*. But in the sentence "Joe got *drunk* at the party last night," the substitution of one of the slang words just listed makes the sentence more than a statement that Joe drank too much alcohol. The attitude towards drinking excessively conveyed by the use of slang is at least non-judgmental, if not admiring, and allies the speaker with the person who has committed the social impropriety. This attitude towards excessive drinking seems motivated more by a desire not to offend a peer than by a desire to rebel against authority.

Most of the time the irreverence of college slang is targeted at social mores; the opposition to authority consists of breaches of good taste, which are often sexual. Take, for example, the following terms for 'public display of affection': *grope*, *grub*, *hook*, *go ninety*, *suck tonsils*, and *schnicky-schnacky*. The apparent callousness of some college slang is more a device of self-protection against not fitting in than a real objection to the social norm. Slang is group directed and belongs to the casual register of speech styles. Slang is not used, therefore, to express individual and private loves, hates, self-doubts, and fears.

In summary, traditional American college students, for normal and healthy reasons, seek a sense of belonging. To accomplish this, they subscribe to fashion in many areas important in their lives--clothing, music, films, recreation, transportation. Their cultivation of slang is the manifestation of socially approved fashion in language.

GENDER-RELATED LINGUISTIC FEATURES: CONSTRAINTS ON THE USE OF HEDGES

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1. INTRODUCTION

In the past two decades the research on language and gender has grown enormously by giving its attention to identifying the specifics of gender-related linguistic features. In more recent years a number of studies (See Coates, & Cameron: 1988) have challenged Lakoff's (1975) hypothesis on the use of gender-related features, particularly hedges (e.g., *sort of*, *I guess*, *maybe*) and tag questions, demonstrating that the gender-difference does not lie in the frequency, and that hedges do not always function as indicators of uncertainty or hesitancy. The purpose of this case study was to investigate sociopragmatic functions of hedges used by male and female professionals as speakers. The specific objective is two-fold: (i) to find out whether the gender-difference in occurrence frequency of hedges exists across speech domains or whether it depends on the type of speech domain, and (ii) to determine what are the social factors or constraints which affect such variation.

2. METHOD

2.1. Subjects, speech domains, and topic

This study explored hedge-use by six male and six female professionals who work in a large company. They are American-born native speakers of English. The study was conducted in three speech domains i.e., business meetings, family conversations, and social gatherings. As for topic, it was suggested 'cultural diversity', a hot issue of the company-wide program which all employees had to be involved in. All subjects agreed to tape their own speech at 'cultural diversity' meetings they had to attend. They also agreed to tape family conversations on topics centered around cultural diversity. The subjects were told that each domain should contain at least 2 hours of conversations, which meant they would have to tape more than one speech event to insure at least 100 speech acts for each domain from each subject. As for social gatherings, the investigator invited the subjects for dinner. Two-three hours of conversation on topics related to 'cultural diversity' were taped.

2.2 Coded-forms of hedges and coding

We restricted forms of hedges to the following three types of downgraders (House & Kasper: 1981). (i) Adverbials of degree (e.g., *sort of, kind of*) by means of which the speaker avoids a precise propositional specification thus circumventing the potential provocation, (ii) modal adverbials of possibility (e.g., *possibly, perhaps, maybe*) which modulate the impact their utterance is likely to have on the addressee, and (iii) hedged performative verbs (e.g., *think, guess, suppose*) which lower the degree to which the speakers commit themselves to the state of affairs referred to in the proposition. Tapes of each subject in each domain were carefully transcribed until 100 speech acts were identified. Two consecutive hedges within a clause such as "*I suppose, uh I think* he is right." were considered a single hedge. However, hedges separated in a compound sentence were counted as separate hedges as in "*Maybe I will be late, but I think* he will be there on time."

3. FINDINGS AND DISCUSSION

3.1. Use of hedges by the males subjects

We found that the frequency of hedges used by the male subjects in business meetings and in family conversations are more or less the same; however, the rate of frequency in these domains is markedly low compared to that in social gatherings. Two interrelated questions are raised here. What do these two domains (i.e. meetings and family conversations) have in common, which made the subjects use almost the same amount of hedges? Why is the frequency rate so low for these two domains and so high for social gatherings?

In order to answer these questions, we call for the 'bulge theory' (Wolfson: 1988), a theory of speech behavior which is based on the ten-years observation: the more status and social distance are seen as fixed, the easier it is for speakers to know what to expect of one another, which implies a more direct speech with the use of fewer hedges. Therefore, we view the use of fewer hedges by our male subjects in the two domains as a reflection of this fixed-relationship; the relationship with interlocutors in business meetings is fixed/unambiguous due to the given status, and the relationship with family members is obviously fixed/certain. On the other hand, our male subjects used significantly more hedges in social gatherings where relationships among interlocutors are uncertain and open to negotiations; there may be flexibility and freedom but not assurance. When interlocutors feel this ambiguous relationship, they tend to negotiate with one another in a mutual back-and-forth progression, and consequently more hedges, mitigating devices, need to be used. In short, the male subjects' use of hedges appears to be constrained by the *relationship (fixed vs. mobile)* with their interlocutors.

3.2. Use of hedges by the female subjects

Two interesting findings were that our female subjects used three times less hedges in business meetings than they did in family conversations, and that the frequency in family conversations was almost as high as in social

gatherings. The low frequency in business meetings can be explained at least in part by the speech accommodation theory (See Giles: 1980), a social psychological approach which elaborates on the notion that language uses reflect a desire in individuals for social integration or identification with another; people adjust their speech in order to express their values and intentions to their interlocutors. The speech domain of business meetings used to be only men's domain in which low frequency of hedges occurs as the nature of the job requires (business-like straightforwardness). Therefore, we view the low frequency of hedges by women as a reflection of a desire for sociolinguistic-professional integration as well as identification with male professionals in role and occupation.

The high frequency of hedges in family conversations can be explained at least in part by 'women's psychological development theory' (See Gilligan: 1982), which elaborates on the notion that women's development occurs differently from men's. An important aspect of the women's psychological development theory is the concept of 'connectedness to others', that "women's sense of self becomes very much organized around being able to make and then maintain affiliation" (Boe 1988: 272). This aspect, which pertains to language choice women make to their psychological development, seems to account for the high frequency of hedges by our female subjects in family conversations. The use of hedges in many different types of contexts during family conversation suggests that our female subjects have learned to use to their advantages certain aspects of speech behavior (e.g., open-mindness, flexibility); their hedge are not necessarily indicative of a tentative personality, but represented, for instance, what Boe would call 'expression of caring'.

To recapitulate, the use of hedges by female subjects appears to be constrained by the role they had to play. An important point to be elicited from their way of using hedges is a role-shift, from the role as a professional (explained through the speech accommodation theory) to the role as a caretaker (explained through the women's psychological development theory). This role-shift supports 'code-switching' position, one of the four positions in the analysis of attitudes toward women's language by Johnson (1983), which values women's language and the ability of women to change their language according to the demands of the situation. That is, the role as a professional seem to have generated fewer hedges due to the straightforwardness needed at business meetings. On the other hand, the role as a homemaker seems to have induced more hedges as an indicative of 'caring' during family conversation.

3.3. Optimal distance for hedging

While our data suggested that there are gender-related constraints on the use of hedges, they also revealed that it was social gatherings in which both the male and female subjects used hedges the most frequently. This was not what we had expected. According to the politeness theory of Brown and Levinson (1987) social distance is one of the three universal determinants of politeness levels (i.e. politeness goes up as social distance goes up). Therefore,

considering hedges as politeness markers, it was expected that the frequency of hedgeS would increase as the degree of perceived social distance increases.

However, our data showed that the frequency of hedges did not covary with the perceived social distance. The speech domain in which the greatest social distance was perceived was business meetings, but the lowest frequency of hedges was shown in this domain. On the other hand, the domain where the highest frequency of hedges was shown was in social gatherings, but the perceived social distance falls into just between the other two domains--business meetings and family conversations. This seems to suggest that there is an 'optimal' social distance for speakers to use hedges the most frequently.

4. CONCLUSION

This study determines that hedges are gender-related linguistic features. However, the difference does not lie in the frequency per se. Rather the difference depends on the type of speech domain. More specifically, the difference lies in what constrains the use of hedges. The male subjects' use of hedges was constrained by the *relationship* (*fixed* vs. *mobile*) with their interlocutors, and the female subjects' use by the *role* (*professional* vs. *caretaker*) taken in the interaction.

Use of hedges is a highly complex and interdisciplinary issue that requires a number of theories and field research. This case study, although limited in terms of number of subjects, opens a new avenue for investigation. McEdwards (1985: 43) wrote "a power language is (...) a form of government and a philosophy of life whose very existence depends upon resolution of problems through negotiations and compromise." To us, or at least to professionals, 'hedges' seem to be linguistic devices of appropriateness which are the outward garment of goodwill. In other words, we view 'hedges' as linguistic features of diplomacy which reflect *relationship* or *role* in dealing with the fundamental feelings of the interlocutors.

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THE INVERSE LANGUAGE TYPE

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A variety of structural organization called inverse (or direct-inverse) has been attributed to many languages. Comprehensive descriptions have been furnished for various Algonquian languages, where inverse behavior is well recognized. Plains Cree illustrations are furnished in (1) (Wolfart & Carroll 1973: 29, 64).

- (1) a. Ni- wāpam -āw (*ni yá*) atim
 1 see DIRECT (I) dog
 'I see the dog'
- b. Ni- wāpam -ik (*ni yá*) atim
 1 see INVERSE (I) dog
 'The dog sees me'

Usually, the telltale indication that one is dealing with an inverse system is the fact that verbs of transitive, non-reflexive predication are marked with a special morpheme, or assigned to a special paradigm, in case an argument denoting a speech act participant, an SAP (first or second person) referent, corresponds to a nonsubject core argument or logical role, especially if cooccurring with an animate third person subject. For instance, in Plains Cree, the language illustrated in (1), a suffix *-ik(w)* (seen in 1b) consistently appears in all forms in which a non-SAP (third person) logical subject combines with an SAP logical nonsubject, whether first or second person.

The formal manifestations of inverseness vary cross-linguistically. For instance, in some languages, such as Plains Cree (see 1), both verbal voices, direct and inverse, are marked; in others, only the inverse is marked; and there are even systems, such as Mapudungun (spoken in Chile), and Arizona Tewa (Kiowa-Tanoan), in which there are no morphemes specific to the alternation of verbal voices, direct and inverse being signaled by an opposition in paradigms of person-indexing affixes.

Another source of variability is case marking. In many inverse systems, such as Algonquian, independent nominals corresponding to core arguments of transitive predication assign no case marking, as in (1). However, in other systems, such as Nocte (Tibeto-Burman), Lummi (Salishan), and Arizona Tewa, core independent nominals do assign overt case.

Researchers have not reached a consensus on analyzing inverness, presumably due to the variability in its formal manifestations. From examining a half dozen inverse languages in the course of the present investigation, it is evident that there is no unique formal behavior or set of formal behaviors found in every inverse language. Consequently, the conformity of a language to the inverse type does not depend on its exhibiting any particular overt property. Moreover, languages may manifest inverse patterning to a stricter or lesser degree.

The degree of a language's adherence to the inverse type largely depends on its conformity to head-marking (Nichols 1986). Head-marking, a structural parameter, is based on a distinction in ways in which the relations of arguments and predicates may be marked: on the predicate, i.e. the head of a phrase or clause; or on the argument, i.e. a non-head or dependent. At the level of clause relations, predators are verbs, dependents are their arguments and adjuncts. Thus in a dependent-marking language, the relations of arguments to predicates tend to be marked on dependents, i.e. on nominals (e.g. via case assignment); and conversely, in a head-marking language, these relations are marked on heads, i.e. on clausal verbs (e.g. via assignment of bound pronominals or agreement affixes). To be sure, head- or dependent-marking is generally not absolute but a matter of degree; and languages in general, including head-marking languages, may select from a variety of means for marking predicate-argument relations, including independent nominal case marking; relational markers, such as adpositions; and word order.

What is peculiar about inverse languages, as manifestations of the head-marking type, is how infrequently they evince any of these strategies. Consider again example (1) in Plains Cree. Here as in many inverse systems, the verb may assign at most one person prefix, and its shape is invariant, regardless of the argument's logical or syntactic role. Moreover, independent nominals, if present, cannot be assigned syntactic roles on the basis of word order, since word order in Plains Cree (and in many inverse languages) is free. Nor, as noted earlier, do independent nominals bear case or other markers of their syntactic roles. Apart from the alternation of voice, there is no overt indication as to which clause actant is to be understood as acting on which. How, then, does an inverse system such as Plains Cree encode the fundamental actant roles in transitive predication?

As discussed in Klaiman (to appear), inverness is based on a ranking of arguments according to *ontological salience*. This factor depends on the referent's centrality to the concerns of the speaker/hearer, either in relation to the universe of objects in general, or in relation to the situation of the discourse. For instance, in (1), the logical subject 'I' ontologically outranks the logical object, because in a typical speaker/hearer's mental universe, a set of participants that includes the speaker and/or hearer has greater prominence than a set that does not. Where the ontological and logical subjects coincide, as in (1a), the voice of the predicate is direct, signaling that the action proceeds in the ontologically expected way, from the most salient to least salient participant. But where the action proceeds in the other direction, as in (1b), the form is inverse.

Based as they are on ontological salience, some inverse languages incorporate an extension in the system of person categories, evincing a category for a third person viewed as remote physically or psychically from the situation of the discourse--the fourth person (or *obviative*).

Inverse systems are distinctive in that predication cannot ordinarily be encoded in both direct and inverse shapes--a feature which contrasts with other voice types (such as passivization). For instance, in Plains Cree, it is

impossible for the predication expressed in (1a) to be formulated in an inverse form, or conversely, for the predication expressed in (1b) to be formulated in a direct form.

But in some inverse systems, certain predictions are reversible--their verbs may assign either the direct or the inverse form--as in the Lummi (Salishan) examples in (2) (Jelinek & Demers 1983:168).

- (2) a. $\ddot{x}ci \quad -t \quad -s \text{ cd}$
 know transitive 3 the
 sw $\ddot{d}y7q\dot{\theta}7 \text{ cd}$ sw $\dot{i}7qo7\dot{\theta}\dot{k}$
 man the boy
 'The man knows the boy'
 b. $\ddot{x}ci \quad -t \quad -\eta \quad \text{cd}$
 know transitive INVERSE the
 sw $\dot{i}7q\dot{o}7\dot{\theta}\dot{k} \text{ d}$ cd sw $\ddot{d}y7q\dot{\theta}7$
 boy by the man
 'The man knows the boy'

Generally, reversibility is confined to predictions in which both core arguments belong to the system's lowest ontological salience ranking. However, an inverse system is more likely to manifest reversibility if it lacks an obviative or fourth person. This is because the encoding of predicate-argument relations in a transitive clause with two non-SAP arguments is facilitated if one of the two arguments must be fourth person, and therefore unequal in ontological salience to the other, third person, argument. Algonquian, for instance, manifests just this constraint.

But elsewhere, reversibility comprises the cost to a system for lacking obviation. It is in such systems (e.g. Lummi, illustrated in 2) that one encounters a limited use of the above-mentioned strategies--case marking; relational marking (see 2b); word order; and so forth--for encoding predicate-argument relations. Naturally, to the degree that this occurs, such systems deviate from strict adherence to head-marking, and correspondingly, to prototypical inverseness.

The present investigation establishes certain generalizations about inverse systems, but perhaps its most important contribution is its establishing what the inverse type is not. For instance, inverse typology does not consist in the mandatory presence of morphology specific to direct voice, nor to inverse voice, nor to obviation. None of these is required in an inverse system (e.g., Arizona Tewa does without all three).

What inverse languages do manifest as a class is head-marking and a tendency for coincidence in form, except for voice marking, of transitive animate predictions which are converse to one another in propositional structure.

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GROUPES FONCTIONNELS ET APPRENTISSAGE DE LA GRAMMAIRE AVEC DU MATERIEL CONCRET

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En tirant profit des recherches menées en psychologie de l'apprentissage et des perspectives théoriques ébauchées en linguistique -plus particulièrement dans le courant dit systémique (Halliday 1985)-, nous avons cherché à donner à la grammaire scolaire un statut similaire à celui des mathématiques en entreprenant des expériences de manipulation d'un matériel concret avec des enfants de cinq à neuf ans. Nous avons observé des expériences d'apprentissage portant sur la façon d'en venir à une écriture correcte par la compréhension des classes et des structures, des ensembles et des sous-ensembles d'éléments, etc qui se trouvent dans la phrase simple et cela, grâce à la manipulation d'objets concrets. Piaget a reconnu que les enfants de six ans et plus pouvaient faire des opérations mathématiques avec des nombres plus petits que 20. De son côté, Cuisenaire a démontré que la manipulation de bâtonnets aidait les enfants à atteindre le niveau des opérations complexes avec les nombres. Et les enfants qui coopéraient à ces expériences avaient à peine atteint l'âge des opérations concrètes. Dans le développement de l'activité logique, la perception du concret devance la correspondance abstraite qui peut être établie entre deux objets. L'emploi d'un schéma sert à la construction d'un pont entre la perception concrète du réel et la représentation abstraite qui en est déduite.

1. Position du problème

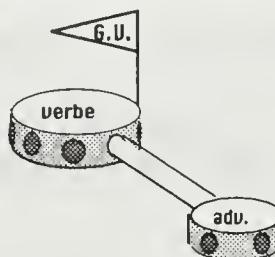
Tout au long des années 70, l'influence des travaux de Chomsky auprès des réformateurs de la grammaire scolaire fut considérable. En présentant l'arbre de Chomsky qui représentait schématiquement la phrase simple par la mise en évidence de ses éléments constituants, on a réussi à plaire à bon nombre de pédagogues. Winograd s'est opposé à Chomsky. Le principal souci de Winograd (1983) a été de simplifier le réseau en réduisant les niveaux au maximum.. Comme Halliday, Winograd a mis en évidence l'importance des fonctions exercées par les éléments constitutifs de la phrase.

Avant d'entreprendre le travail de conceptualisation et celui d'instrumentation en didactique du français, il faut procéder aux choix d'ordre terminologique et de délimiter les groupes fonctionnels qui constituent la phrase. La grammaire consiste dans l'étude de l'organisation des groupes et des mots qui composent la phrase de façon à pouvoir écrire correctement. Dans la phrase, trois groupes fonctionnels sont fréquents: ce sont le groupe sujet, le groupe verbe et le groupe complément. Le groupe sujet peut être composé d'un ou de plusieurs éléments; il s'agit du nom, auquel peuvent s'ajointre le déterminant, l'adjectif qualificatif, le complément de

nom, la proposition relative, ou encore un autre nom. Le groupe verbe peut être composé d'un ou de plusieurs éléments; il s'agit du verbe, auquel peuvent s'ajouter l'auxiliaire ou l'adverbe (Figure 1). Le groupe complément peut être composé des mêmes éléments que le groupe sujet, auxquels on peut ajouter la préposition.

Figure 1

Construction ou schéma d'un groupe verbe



Le renard

court

vite.

2. Recherches menées en ce domaine

Wittwer (1959) demande à des enfants âgés de 8 à 15 ans d'isoler les mots ou les groupes de mots dont la fonction grammaticale est celle de sujet du verbe. Les enfants réussissent mal à reconnaître le groupe sujet dans des phrases. Janin (1976) et Brossard et Lambelin (1985) vérifie la capacité qu'ont les enfants à identifier les groupes fonctionnels. Nous avons préparé un matériel concret manipulable (Lemire 1991) qui aide l'enfant dans l'apprentissage de certains concepts -ceux des constituants de la phrase simple: GS ou l'acteur et GV ou l'action. Il convient de l'utiliser au stade opératoire concret.

3. Recherche de Margarita Da Silva

Margarita Da Silva (1992) a mené une expérience avec ce matériel concret dans une école primaire de la région de Québec avec quatorze élèves d'une classe de première année. À la fin des activités d'apprentissage, nous avons eu une entrevue avec un enfant de chaque petit groupe. Les réponses provenant de ces entrevues de type semi-structuré ont fourni les données observables qui ont permis de faire les comparaisons entre les apprentissages envisagés avec le matériel concret et semi-concret. Le but spécifique était de reconnaître la phrase simple composée par le GS ou l'acteur constitué de deux éléments et le GV ou l'action constituée d'un élément. Nous avons obtenu les résultats suivants: 8 enfants sur 14 n'ont pas construit le schéma au moment où on a présenté le modèle; 14 enfants sur 14 ont construit la phrase par rapport aux couleurs et à la taille des rondelles; 12 enfants sur 14 ont reconnu que l'acteur était composé de deux mots et l'action d'un seul mot. L'observation s'est déroulée en tenant compte de trois niveaux correspondant à trois étapes au cours desquelles le support perceptif servant à construire la phrase a changé. Au premier niveau, celui des cartes-images, le support perceptif était toujours présent. L'enfant a eu besoin de faire une mise en relation entre l'image ou signifiant et les rôles -l'acteur et l'action - ou signifié (Tableau 1).

Tableau 1

	Matériel semi-concret Signe (cartes-images)	
Signifiant	représente	Signifié
l'image du corbeau	représente	l'acteur
l'image du corbeau qui vole		l'action

Nous avons observé que les enfants n'ont pas eu de problèmes à effectuer cette activité. Les images sont un support précieux qui aide à faire des opérations logiques.

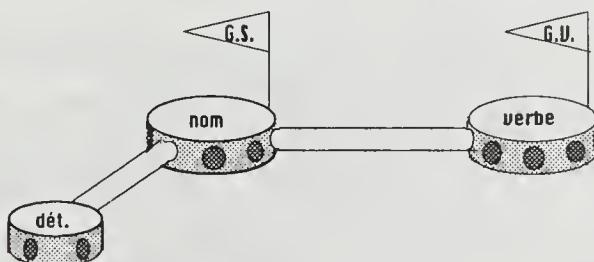
Au deuxième niveau, celui du matériel concret, les rondelles colorées et liens en bois, le support est concret. La mise en relation se fait au niveau du signe car le support perceptif par lequel elle pourrait se faire, n'existe plus. Il faut faire un décodage "intellectuel" -opposé ici au décodage perceptif- pour passer du signifiant, les rondelles, au signifié, ce que représente chaque rondelle.

Tableau 2

Matériel concret		
Signifiant (rondelles)	Signe (rondelles en bois)	Signifié
La petite rondelle verte	représente	Le petit mot «Le»
La grosse rondelle verte		Le nom animé «renard»
La grosse rondelle jaune		Le verbe d'action «manger»

Cette étape requiert un décodage intellectuel plus exigeant parce que cette activité exige le décodage du signifiant qui permet d'accéder au signifié. C'est le passage du concret -les rondelles- à l'abstrait -les groupes fonctionnels. Ainsi la structure d'une phrase peut être construite avec trois rondelles dont les deux rondelles vertes, une grosse et une petite, liées entre elles pour représenter l'acteur -Le renard- et la grosse rondelle jaune -mange- liée à la grosse rondelle verte pour représenter l'action. Six enfants ont construit d'autres schémas comme par exemple, celui qui est décrit par Maude, 6:06, qui a été interrogée - *Là, je m'ai mêlé. C'est à cause qu'il y a deux affaires, ça -là petite rondelle verte- fait que je l'ai mis comme il faut et c'est comme je l'ai fait.* Philippe, 7:00, a réussi et il a dû découvrir la structure requise en donnant un sens aux couleurs et à la taille des rondelles; il confirme qu'il a dû placer -en premier la petite rondelle verte qui veut dire le plus petit mot "Le", puis en deuxième la grosse rondelle verte, qui veut dire "renard" et en troisième la grosse rondelle jaune qui veut dire "manger".

Figure 2 Construction ou schéma de phrase



Le renard mange.

Cela veut dire qu'il a incorporé des données de l'expérience qu'il possédait -les concepts de nombre ordinal- pour construire le schéma requis. Et en même temps, il a appliqué la stratégie positionnelle de proximité -le nom le plus proche du verbe est l'acteur.

Au troisième niveau, celui du matériel semi-concret, la mise en relation doit se faire à partir des rondelles et liens en papier. Pour six enfants cette activité de décodage intellectuel avait déjà été faite dans l'étape précédente. Ils y avaient

construit le schéma de la phrase sans problèmes. Pour les autres, huit enfants, ils ont dû faire le décodage intellectuel tout au long de cette étape.

Tableau 3

Signe:	Les rondelles en papier
Signifiant:	Placer les rondelles selon leurs tailles et couleurs dans un ordre précis afin de trouver la structure convenable.
Signifié:	La phrase écrite composée de trois éléments dont les deux rondelles vertes représentant l'acteur et la rondelle jaune représentant l'action.

Cette activité a demandé un décodage d'un niveau de difficulté aussi élevé que celui de la deuxième étape, parce qu'il s'agissait de construire une phrase avec trois rondelles, les rondelles étaient différentes et les liens aussi.

4. Conclusion

L'exploration que nous avons menée avec ce matériel didactique nous a révélé que les apprenants de ce niveau d'âges sont capables de reconnaître les deux principales fonctions exercées par les groupes de mots dans une phrase simple. Ils sont arrivés à la reconnaissance de ces fonctions en construisant leurs propres structures et en manipulant eux-mêmes les rondelles. Nous considérons que ces activités menées avec ce matériel ont donné aux enfants une autre vision de la structuration et de la construction des phrases.

Au moyen de la logique de l'action, l'enfant amorce le cheminement critique qui conduit à l'intériorisation de ses actions. Les chaînes de groupes fonctionnels sont ordonnées de façon à construire des modèles de phrase dont les structures sont supportées par les différents systèmes exploités par les locuteurs. La description des travaux de recherche que nous menons auprès des jeunes enfants tend à démontrer que le passage par les moyens concrets permet de provoquer à un âge tendre des réflexions qui se manifestent par des actions traduisant l'opérationnel concret auquel l'enfant peut accéder. Le couronnement de ce cheminement a lieu lorsque les enfants peuvent accéder aux opérations formelles; le fonctionnement de leur cerveau sans le recours à des supports extérieurs leur permet alors de classer, d'organiser, de mettre en relation.

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LA VITALITÉ CONSTANTE DES CARACTÈRES CHINOIS

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Pendant longtemps, les signes graphiques du chinois, dits "caractères" (en chinois "Zì"), apparaissaient à certains comme une écriture arriérée qui ferait place inéluctablement à une écriture phonétique. Or, le fait est que cette écriture traditionnelle qui a une histoire de cinq ou six millénaires, demeure en vigueur en Chine comme la langue écrite officielle. Et la transcription phonétique chinoise, dite 'pīnyīn', au lieu d'être une simple écriture phonétique, est plutôt un moyen par lequel on popularise la langue commune dite "pǔtōnghuà" et favorise l'alphabétisme en Chine.

Pourquoi ce nouveau système phonétique, ne s'est-il pas substitué au système traditionnel? La seule raison réside dans les propriétés de cette langue. Essayons d'en analyser ici quelquesunes des principales.

Primo. En chinois, pour l'oral, l'unité minimale est la combinaison d'une consonne dite "shēngmǔ" et d'une voyelle dite "yùnmǔ". Chaque unité minimale constitue en général une syllabe tonique. Dans la langue officielle, on compte vingt et une consonnes et trente neuf voyelles, qui peuvent se combiner en cent neuf syllabes usuelles. Et avec ses quatre tons, le chinois compte environ, mille trois cents syllabes toniques. Par ces syllabes limitées, on exprime les mots ouverts, un lexique le plus riche du monde. Imaginons le nombre étonnans d'homophones! Si ces derniers s'exprimaient par une écriture phonétique, les homophones deviendraient tout d'un coup homographes. Quelle confusion alors dans la communication! Mais grâce à cette écriture dite "idéographique", les Chinois parent convenablement à cet inconvénient frappant de leur langue.

En chinois écrit, on a pour tous les homonymes un élément phonétique et un élément déterminatif sémantique, ou différenciateur, qu'on a l'habitude d'appeler "clé". Prenons un exemple, la syllabe qīng (au premier ton): pour le caractère qui signifie "pur, limpide", on a la clé de l'eau, et pour le caractère "libellule," on a la clé de l'insecte. Citons encore la syllabe qīng (au deuxième ton): pour le caractère qui signifie " (temps) clair", on a la clé du soleil, et pour le

caractère “sentiment”, on a la clé du cœur,. Quant au qǐng (au troisième ton), le caractère signifie “demander, prier”, si l'on a la clé de la parole. Selon les statistiques, chaque syllabe à ton représente en moyenne cinq caractères. Il faut donc que l'écrit intervienne à tout instant. Au cours de la communication en chinois, on explique souvent les éléments graphique d'un caractère donné, afin de le distinguer de ses homophones.

Secundo. En chinois écrit, les caractères, unités lexicales, sont composés de traits, unités minimales de graphie, dont les neufs traits essentiels. Dans la plupart des cas, la composition des caractères est rationnelle ayant un tracé qui permet de fixer à sa seule vue, sinon le sens approximatif du caractère (équivalent d'un mot ou d'un composant d'un mot), du moins le groupe d'idées auquel il appartient. A partir d'un nombre limité de caractères simples ont été formés par la suite des caractères complexes qui constituent la majeure partie des idéogrammes ou phonogrammes en usage aujourd'hui. On obtient un caractère complexe, en combinant deux ou plusieurs caractères simples dont l'association traduit l'idée. Par exemple, le caractère 木 mù signifie “bois (matière)”, le double mù 林 est employé pour le mot lín “bosquet”, le triple mù 森 pour le mot sēn “forêt”.

L'ensemble des mots chinois est réparti sous des clés qu'on a classées en 214 rubriques dans le Dictionnaire dit XINHUA ZIDIAN. Cependant, les caractères servant de clés ne se prononcent plus, ils précisent la classes sémantique, et gardent une valeur idéographique. Citons la clé de 雨 yǔ “pluie”, sous cette rubrique, on compte des mots complexes tels que 雪 xuě “neige”, 雲 yún “nuage”, 觀 ní “arc-en-ciel”, 霧 wù “brouillard” ou “brume”, etc.

Ainsi établi, le système permet des combinaisons infinies avec un nombre limité d'éléments. Dans un caractère dit “phonogramme”, les deux éléments indiquent respectivement d'après les fonctions qu'ils assument, le sens et le son.

Tertio. Chaque caractère qui n'a qu'une seule syllabe, équivaut, surtout en ancien chinois, à un mot (mot simple ou mot complexe). D'où on croit que “le chinois est une langue monosyllabique”. Or, il faut signaler que depuis le siècle dernier, beaucoup de mots sont devenus disyllabiques, par exemple, “l'oeil” autrefois “mè”, maintenant “yǎn·jing”; “ne...pas (encore), “wèi” en ancien chinois, “méi·yǒu” maintenant.

Quant aux mots nouveaux, ce sont, pour la plupart, des polysyllabes (en général des dissyllabes) qu'on a composés avec des caractères usuels. Si l'on peut dire, même processus pour ce qu'on appelle les “agrégats logiques”, signes formés de deux unités déjà sinifiantes comme dans les mots français “passe-partout” “gratte-ciel”. A partir des caractères ou mots usuels, le chinois forme des néologismes d'une manière simple et logique, ce qui réduit le nombre des signes différents à retenir. Citons certaines disciplines de la médecine:

nèikē	“discipline intérieure”:	la médecine générale
wàikē	“discipline extérieure”:	la chirurgie
érkē	“enfant-discipline”:	la pédiatrie
fükē	“femme-discipline”:	la gynécologie
chǎnkē	“accouchement-discipline”:	l'obstétrique
yǎnkē	“oeil-discipline”:	l'ophtalmologie
píkē	“peau-discipline”:	la dermatologie
gǔkē	“os-discipline”:	l'ostéologie

Malgré le nombre total de caractères qui s'élève à plus de 50 000 dans les dictionnaires, les caractères d'usage courant ne comptent que 3 500, d'ailleurs les phonogrammes en constituent de 80% à 90%. Le fait est que cette langue idéographique est à même d'exprimer toute l'expérience humaine et toute notion nouvelle, sans, “une explosion du nombre de signes employés” comme on le croit.

Quarto. Les caractères sont rattachés ainsi directement aux sens, sans avoir besoin de passer par l'intermédiaire du langage sonore comme le fait l'écriture phonétique. C'est là, une des supériorités de cette écriture surprenante, supériorité qui a joué un grand rôle dans l'unification d'un pays qui compte huit zones linguistiques, divisées en multiples dialectes, de même que dans son universalité dans l'espace qui peut s'étendre jusqu'aux pays voisins, tels que le Japon, Singapour, la Corée, abstraction faite des variations intervenues dans la prononciation et la signification de certains caractères. Tout comme nous écrivons 2,3,4, en chiffres arabes, tous les peuples les utilisant les comprendront directement de façon identique, tout en les prononçant chacun dans leur langue respective. Ce qui nous rappelle Leibniz: “A peine eût-il pris connaissance de l'écriture chinoise, Leibniz, d'un coup de son génie, comprit qu'il tenait là une écriture universelle par excellence”. (cf. Roger Druel, Herman Grégoire, LA CIVILISATION DE L'ECRITURE, p. 270)

L'avantage évident de ce système d'écriture pour la facilité de compréhension et l'universalité de son usage réside dans le fait que ce système est basé sur le sens, élément commun à tous les humains, et non sur le son, élément particulier à chaque langue donnée.

Quinto. Pendant près d'un demi-siècle, on a nourri en Chine les conceptions selon lesquelles le traitement par ordinateur des caractères chinois serait une chimère. Certains ont même pris l'initiative d'utiliser la transcription phonétique à la place des caractères traditionnels. Depuis les années 70, on avance dans l'essai et le traitement par ordinateur du message en chinois. Après de nombreux tâtonnements, on a réussi à de multiples programmations en utilisant les touches du clavier d'une machine électronique pour former et introduire les caractères carrés par la transcription phonétique ou par les cinq traits (de base). La vitesse opérationnelle est très satisfaisante, même plus grande que si l'on réalise un même texte en anglais dont chaque lettre demande à être tapée une fois, chaque mot se composant, pour la plupart, en moyenne de 4 lettres ou plus, tandis

que pour des caractères chinois, chacun ne demande qu'à être tapé 4 fois, ou même 2,8 fois en moyenne.

Il est certain qu'en chinois la linéarité est pertinente dans l'ordre des mots. Mais une remarque importante s'impose: si les lettres des alphabets sont disposées dans le même ordre que les sons correspondants en discours parlé, les caractères chinois disposent leurs traits non pas en succession linéaire mais comme une figure en surface, cela veut dire qu'un caractère monosyllabique peut nous donner plus d'informations qu'un mot polysyllabique de l'écriture phonétique ou alphabétique. Quand on conçoit des programmations pour le chinois, on ne manquera certainement pas d'en profiter.

Conclusion: Des données susmentionnées, on pourrait conclure que l'écriture chinoise, la plus ancienne des écritures, est en état de servir l'époque électronique aussi bien que les anciennes sociétés. La combinaison miraculeuse de ses signes graphiques de forme carrée avec le cerveau électronique nous en donne la preuve convaincante. Ce qui nous inviterait à revaloriser cette langue souvent sous-estimée dans son histoire.

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LANGUAGE IN ZEN LITERATURE

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0. This paper is concerned with the following two points:

1) Compared with ordinary literary works, in Zen literature there are many non-words or semiwords such as interjections or interjection-like words and onomatopoeias, and deictics as represented by demonstratives. Why is Zen literature full of such words and expressions?

2) In Zen literature, quotations are often used without being marked as such. Why is such apparent "plagiarism" overlooked in Zen literature?

In this paper I would like to discuss these questions in terms of the relations between the Zen attitude toward language and such linguistic concepts as onomatopoeia and deixis.

1. First, let me give the following *koan*, a discourse between a Zen master and a monk, from *Rinzai-roku* (The Record of Lin-chi). It goes:

The Master (Rinzai) asked a monk called Anzan: "What is the white ox on the bare ground?"

"Moo, moo!" said Anzan.

"A mute, eh?" said the Master.

"Venerable sir, how about you?" said Anzan.

"Shurrup! You beast!" said the Master.

At first sight the meaning of this *koan* appears to be beyond intellectual reasoning. Along with the seemingly illogical, elusive surface meaning, however, there runs a flow of underlying meaning which is clear-cut in the light of the essence of Zen, and which is exchanged between the two speakers, as follows.

"Where is YOUR OWN TRUE LIVING SELF located? Show it to me," Rinzai asked.

"HERE IT IS!" answered Anzan, mimicking an ox.

"Now you've attained a CERTAIN stage in your enlightenment, haven't you?" the Master commented.

"Dear Master, what is YOUR present stage, then?" Anzan asked, this time in a human voice.

"Oh, dear! What a disappointment! You are NOT an ox after all! Why didn't you reveal your attainment as an OX? When did you give up being an ox?" shouted the Master.

The mimicry of the mooing sound of an ox is somewhat similar to a Japanese expression like "*I'm coffee,*" a clipped form of "*I'm fond of coffee,*" or "*I'm taking coffee,*" frequently used when ordering a drink in a coffee shop. Surely, I am NOT coffee, but from the Zen point of view, it might be said that a person ordering coffee is ordering coffee without entertaining anything else in his mind and that in this sense he IS coffee and nothing else. This is also the case with the above dialogue. Anzan attempts to identify himself as an ox and nothing else by mimicking an ox. He himself represents his own true living self in HIS ox at the very moment of his mimicking. Interjectional abusive expressions like "*Shurrup!*" and "*You beast!*" are the Master's kindness to immediately direct Anzan to his own living self and to make him realize that one's true living self does exist in oneself, not anywhere else.

Thus onomatopoeia is often employed in Zen literature to reveal the present stage of one's awakening to the Zen truth that every existence is created equal, however different it appears; any entity of any kind existing in the universe, which is only a vessel for the living truth, is shining with this truth. Every human affliction arises from dualistic reflection or discrimination. Interjections or interjectional expressions, although abusive in most cases, are thus used to crush this entrenched dualistic view.

2. Another *koan*, the 37th *koan* of *Mumonkan*, goes as follows:

A monk once asked Joshu, "What is the meaning of the Patriarch Bodhidharma's coming from the West?" Joshu immediately answered, "*That oak tree in the front garden!*"

Joshu's answer is immediately done in such a concrete way that he points to an oak tree in the garden of the monastery where he and the monk are sitting. Bodhidharma is the founder of Zen (Ch'an) Buddhism. But the point the monk is asking is, no doubt, what is the essence of Zen, the true living self, and how it can be

grasped. Master Joshu's answer, "That oak tree in the front garden," is made to smash the questioning monk's presupposition that the essence of Zen must be profound and sacred, not directly related to his own existence, and to immediately make the monk face his own true living self right here and now. Deictic expressions are employed thus in Zen literature. Dr. Daisetz Suzuki, a world-famous Buddhist scholar, said in his essay "One Hundred Topics in Zen" that there is nothing but *shako* ('zhè ge' in Chinese) in Zen and that nothing comes before and after this *shako*. Its literal meaning is 'this, this' with *this* person or object pointed to. In this sense both *shako* and deixis can be specified and captured in relation to the speaker's spatio-temporal zero-point in the actual context at the moment of his utterance, I-here-now, which is freely applied to any person, place, and time, according to the switch of the speaker's role. (Lyons 1977: ch.15)

In this connection, Master Joshu's deictic way of direct teaching reminds us of that of Jesus. He says: "*Look at THE birds of the air: they neither sow nor reap nor gather into barns, and yet your heavenly Father feeds them.*" (Matthew 6:26) All Joshu and Jesus do is point to a concrete object present before them right here and now. The only difference between them is that Joshu makes no explanation about the object he is pointing to, while Jesus does. In this sense, Dr. Suzuki says that what Zen literature presents in the form of *koan* is only subject with no predicate following it, or an absolute word which involves these two components of the sentence.

3. The above discussion is summarized in Mumon's following poem with which the above 37th koan of *Mumonkan* concludes. It goes:

Words do not convey actualities;
 Letters do not embody the functioning of the mind.
 He who attaches himself to words is lost;
 He who abides with letters will remain astray.

Actually this poem is plagiarized by Mumon (1182-1260), the author of *Mumonkan* and a Chinese Zen master, from one of the *koan* of Tozan Shuso (910-990), also a Chinese Zen master. However, it never matters that a Zen master quotes another's words in upholding his own Zen. It is because Zen insists that words can tell us ABOUT the truth but that there exists no truth in words themselves; it freely realizes itself in any existence in the universe. In this respect, we are reminded of Jesus' last cry on the cross,

“E ‘ lo-i, E ‘ lo-i, la ‘ ma sa-bach-tha ‘ ni?” (Mark 15:34), which is quoted from the 22nd Psalm. Yet this could not be called plagiarism. Thus one’s own living experience prior to any description of it is most highly valued also in Zen.

4. In presenting the Zen truth, one’s own true living self, Zen literature employs mainly two ways: onomatopoeia and deixis. It is because Zen demands that one should become an embodiment of this true living self which is not reducible to mind or body and is acting vividly right here and now, prior to all dualistic reflection or discrimination. Both onomatopoeia and deixis are thus used in Zen literature to immediately awaken us to this experiential fact which precedes all thoughts and philosophies. Accordingly, any verbal exposition about this Zen truth, however full it may be, is regarded as of minor importance. And so “plagiarism” as such does not exist in Zen literature.

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STRATEGIES D'ECRITURE ET MODELISATION

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Nous avons entrepris des recherches qui conduiront à la modélisation des opérations mises en oeuvre lors des activités d'écriture menées par les scripteurs en tenant compte des chaînes d'actions qu'ils exploitent. Notre analyse comprend les activités qui vont du travail de saisie du sujet jusqu'à la production de la facture finale du texte.

1. INTRODUCTION

Nous avons d'abord mis en évidence quelques écrits portant sur les œuvres de didactique touchant la production de discours, de l'Antiquité (Socrates-Platon, Aristote, Cicéron), en passant par le Moyen-Age et la Renaissance (Wilson 1553), jusqu'aux temps modernes et à l'époque contemporaine (Genette 1969, Dubois 1970, Perelman 1958, Grey 1972). A la suite de ce parcours sélectif de la littérature, nous avons entrepris une étude empirique à caractère exploratoire par l'observation systématique de groupes de scripteurs pour décrire les chaînes d'actions qu'ils utilisent.

Les résultats de nos travaux ont apporté quelques éléments de réponse aux deux questions autour desquelles gravite notre recherche:

Question 1: Laissées à leur propre initiative, les personnes qui écrivent recherchent-elles un encadrement didactique?

Question 2: L'âge du scripteur favorise-t-il la mise en oeuvre d'opérations dont l'ordre se précise en cours de croissance?

Nous avons porté une attention particulière aux premières opérations mises en oeuvre lors de la production de discours.

2 SUJETS INTERVIEWES ET DONNEES

Il nous a semblé pertinent pour notre étude de placer les cheminements d'enfants et d'adolescents dans le voisinage de ceux d'un groupe de professionnels de l'écriture. Voici la présentation des groupes: **groupe A** qui est formé de six jeunes du second cycle du primaire (10-11-12 ans); **groupe B** qui est composé de six adolescents; **groupes C (M) et C(F)** qui sont constitués de sept hommes et six femmes travaillant comme professeurs ou chercheurs au niveau de l'enseignement supérieur.

Nous avons élaboré un questionnaire qui a permis de faire la cueillette des données constituant notre corpus dans le but de faire l'étude des actions exploitées dans la production de l'acte d'écriture. Ces actions se rattachent aux cinq classes suivantes: 1) l'invention; 2) le plan; 3) l'écriture; 4) la réécriture; et 5) la classe autres actions.

3. ANALYSE DES DONNEES

A titre exemplaire, nous donnons quelques-uns des résultats du sujet OM. Professeur et chercheur, son accueil fut très réservé. Le sujet OM a fait appel à des actions relevant des quatre domaines. Il y a une utilisation équilibrée des domaines de l'invention et de la réécriture dans l'élaboration de sa stratégie d'écriture (Tableaux LXVII-LXVIII).

OPERATIONS MENTALES (OM-1) TABLEAU LXVII

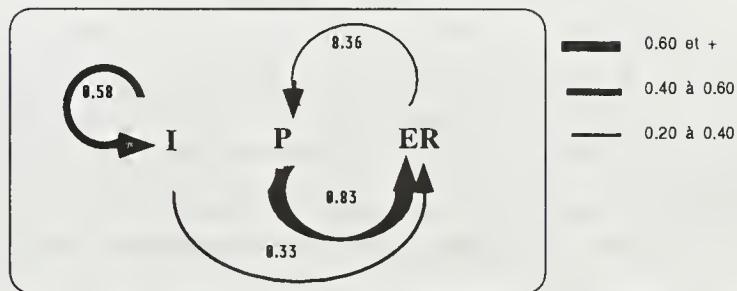
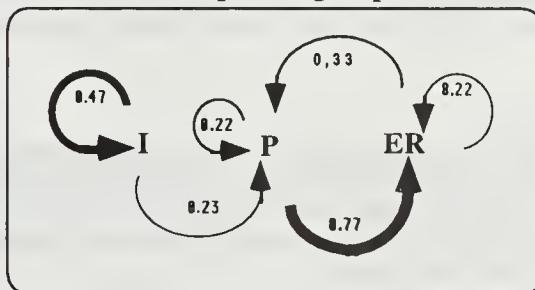
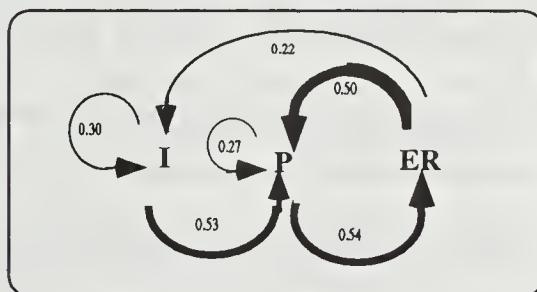
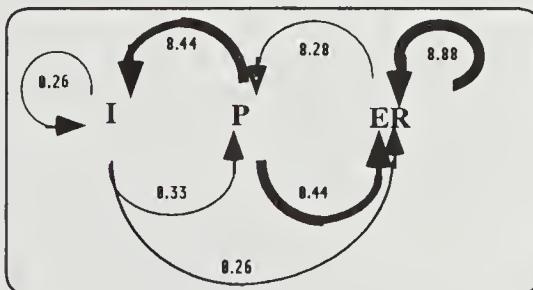
1.0 Déterminer le sujet	
1.1 Cueillir les idées	1.1.1 Improviser;
1.2 Ordonner	1.2.1 Regrouper
	1.2.2 Diviser en trois points classiques;
1.3 Esquisser le texte	1.3.1 A main levée;
1.4 Améliorer	1.4.1 Les idées, le voc. le style;
1.5 Améliorer	1.5.1 Réécrire une 2e version.

TABLEAU LXVIII

Opérations Domaines	ANALYSE DESCRIPTIVE									
	0	1	2	3	4	5	6	7	8	9
1 Invention	I									
2 Plan		P								
3 Ecriture			E							
4 Réécriture				R	R					
5 Autres				E	E					

Il est utile de faire appel à la force explicative des matrices de transition; elles modélisent les domaines de l'activité humaine qui sont objets d'études pour permettre de monter à un niveau d'abstraction plus élevé. Le modèle mathématique markovien qui est illustré par le graphe avec le réseau de flèches (Figures 1-4) explicitant les indices de probabilités de transition est appelé amnésique par le fait qu'il ne peut prédire les transitions d'enchaînement dans une suite de plus de deux actions. On a recours à des réseaux relationnels pour faire l'analyse de faits provenant de l'expérience humaine. Un modèle de type linéaire et un recours aux indices de fréquence ne nous auraient pas permis de mettre en évidence la cohérence des actions de ce domaine.

Ainsi le groupe d'adultes C(F) a trois transitions (Figure 4) à partir de l'invention, soit I--->I, avec 0.26 des probabilités de transition, I--->P, avec 0.33, et I--->E/R, avec 0.26. Mais ce qui distingue ce groupe, c'est le mouvement circulaire de l'écriture/réécriture sur l'écriture/réécriture -ou révision- (E/R<---E/R) avec 0.80. Il n'y a pas de rétroaction en ligne continue de l'écriture/réécriture à l'invention (I<---E/R) mais le mouvement de rétroaction se fait plutôt de l'écriture/réécriture au plan (P<---E/R) avec 0.20 et du plan à l'invention (I<---P) avec 0.44 de probabilités de transition.

Figure 1**Graphe du groupe A****Figure 2****Graphe du groupe B****Figure 3****Graphe du groupe C(M)****Figure 4****Graphe du groupe C (F)**

4. CONCLUSION

Chez les jeunes du cours primaire (Groupe A), on accorde moins d'importance aux procédés de planification et de réécriture (Figure 1) qu'à la recherche des idées, des sentiments ou des émotions à exprimer. Au cours secondaire (Groupe B), le domaine du plan prend une importance stratégique plus grande. Tous les domaines sont exploités, s'agit-il d'une influence de l'école ou de la tendance à une exploitation rationnelle des procédés? Il semble s'instaurer une didactique de l'écriture par l'exploitation ordonnée des actions relevant des domaines d'opérations qui concourent à la production de textes. Le domaine de la révision semble le lot négligé de la part de ces scripteurs (Figure 2).

Chez les adultes, les femmes (Figure 4) accordent plus d'importance à I et ER; I sert trois fois de point de départ et ER sert trois fois de point d'arrivée; les hommes accordent plus d'importance à P, il sert trois fois de point d'arrivée; R n'est qu'une fois le point de départ ou le point d'arrivée et P, trois fois le point d'arrivée (Figure 3).

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IMPLANT COCHLÉAIRE ET PHONÉTIQUE : RÉSULTATS LINGUISTIQUES D'UN PROGRAMME D'ENTRAINEMENT AUDITIF

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Dans l'optique d'une évaluation objective et linguistique de la perception de la parole avec un implant cochléaire, un processus d'entrainement auditif rigoureux a été mis au point. Il a été appliqué systématiquement pendant 2 ans dans le cadre d'un projet de recherche sur l'implant cochléaire (PROJET FRSQ, 1988-1990). Ainsi, 9 personnes atteintes de surdité acquise et porteuses d'un implant cochléaire NUCLEUS ont suivi le programme d'entrainement auditif aux sons de la parole. Notre communication présente d'abord les caractéristiques du programme d'entrainement auditif qui a été appliqué dans le projet. Elle aborde ensuite le thème de l'évaluation comprise dans le processus d'entrainement. Enfin, elle expose quelques résultats obtenus à partir des évaluations aux exercices d'entrainement auditif à la parole.

1. PROGRAMME D'ENTRAINEMENT AUDITIF

1.1. Objectifs et nature

L'objectif premier de l'entrainement auditif vise l'évaluation linguistique, la plus objective possible, de la perception de la parole avec l'implant cochléaire. L'évaluation se fait selon un processus systématique et structuré de la perception de la parole. L'entrainement systématique aux nouvelles sensations auditives établit progressivement la perception en termes de discrimination, d'identification et de réapprentissage du code phonétique et linguistique. Il touche tous les niveaux de la structure de la langue et se déroule de façon intensive, afin de fixer à nouveau les nouvelles modalités de transmission du code phonétique de référence.

Dans l'élaboration du processus d'entrainement auditif, nous avons misé davantage sur l'entrainement aux sons de la parole, nous contentant de guider l'habituation aux bruits environnementaux, qui, à cause de leur répétition et leurs qualités "grossières" exigent moins de précision analytique au décodage que les caractéristiques fines des éléments linguistiques.

Compte tenu de nos objectifs à vouloir évaluer l'efficacité de l'appareil NUCLEUS, d'en connaître le fonctionnement pratique tel que vu par un patient, et de nous préoccuper de la perception de tous les éléments de la langue, nous avons privilégié l'approche analytico-globale comme méthodologie d'entrainement.

Ainsi, l'entrainement prend son point de départ avec les unités de base de la langue : les phonèmes. Ces unités, simples et isolées, sont ensuite regroupées pour former des unités de plus en plus longues et complexes : syllabes, mots,

éléments de phrases, phrases. La progression de cette démarche se déroule selon les différents niveaux d'analyse de la langue. On démarre en concentrant l'identification et la discrimination sur les unités les plus simples, présentées isolément. On procède ensuite à des regroupements de phonèmes pour former des unités de langue plus longues. Les étapes de la démarche habituent à une intégration des unités plus longues par la combinaison des éléments isolés assimilés et compris. On construit ainsi, à tout le moins, on force le patient à reconstruire l'habitude à décoder le message oral des locuteurs.

1.2. Séance d'entraînement

Le programme d'entraînement auditif utilisé en recherche prévoit 65 séances de 2 heures chacune. D'une façon générale, une séance d'entraînement se déroule comme suit :

- Prise de contact
- Conversation; compte rendu des expériences individuelles extérieures
- Révision
- Objectif d'apprentissage; entraînement; évaluation
- Exercices complémentaires ou facultatifs d'entraînement auditif
- Counseling
- Pause (à environ la demie de la séance)
- Objectif d'apprentissage; entraînement; évaluation
- Exercices complémentaires ou facultatifs d'entraînement auditif
- Didactique : principes à rappeler à l'utilisateur

L'organisation de la séance d'entraînement auditif ne fait pas appel seulement à l'aspect linguistique. La pédagogie, la psychologie, le counseling, ainsi que la didactique sont autant d'aspects tout aussi importants à considérer dans le processus de réhabilitation après implantation. La séance d'entraînement présente un contenu adapté à la personnalité du nouvel implanté. La place des composantes est variable, et la présence de certaines est facultative. Cela va avec les intérêts, la personnalité, l'état physique et psychologique du patient. Avec le patient implanté, l'adaptation aux circonstances est essentielle. Il ne faut pas viser à le forcer à entrer dans un cadre rigide, mais plutôt ajuster le cadre aux besoins du patient, tout en ne perdant pas de vue les objectifs d'apprentissage envisagés.

1.3. Exercices d'entraînement

L'entraînement auditif comprend des exercices obligatoires, imposés à tous les patients impliqués dans le processus de réhabilitation après implantation cochléaire. Ces exercices structurés permettent d'obtenir des mesures comparables des progrès de la rééducation auditive de la perception de la parole. C'est à partir d'eux que les évaluations sont faites. Les exercices obligatoires du programme d'entraînement auditif sont regroupés selon différentes catégories : voyelles, consonnes, logatomes, monosyllabes, dissyllabes, polysyllabes, phrases, dialogues-ressources, prosodie, lecture minutée, compréhension de textes, bruits environnementaux. A l'intérieur de chaque catégorie, les éléments choisis pour composer les exercices répondent à des critères linguistiques spécifiques.

L'entraînement auditif comprend aussi des exercices complémentaires. Ils permettent d'approfondir le contenu essentiel et de donner un entraînement supplémentaire sur les unités linguistiques à discriminer nécessairement.

Des exercices facultatifs peuvent également être présentés. Ils répondent directement aux besoins spécifiques et aux intérêts du patient. Ils concernent tou-

jours le code linguistique mais ne sont pas nécessairement dépendants du contenu obligatoire. Ils s'ajoutent pour faciliter davantage l'usage de la parole et renforcer les acquis de base.

2. ÉVALUATION

L'évaluation dans le processus d'entraînement auditif des sourds consiste à mesurer avec rigueur l'efficacité de la communication à l'aide de la prothèse auditive. Elle vise aussi à établir le rapport d'amélioration de la netteté ainsi que de l'intelligibilité du message avec cette audition restaurée.

L'évaluation se pratique à la suite d'un apprentissage spécifique; il est essentiel que le patient soit entraîné sur un ou des éléments linguistiques choisis et qu'après cet entraînement, on mesure la performance acquise. L'accumulation des éléments de mesure permet d'évaluer la progression du patient, de comparer les résultats d'une séance d'entraînement à l'autre, ainsi que les résultats de patients entre eux. Notre protocole d'entraînement comprend deux types d'évaluation : l'évaluation formative et l'évaluation sommative.

L'évaluation formative est celle qui s'accomplit après chaque exercice obligatoire présenté au patient lors de la séance d'entraînement. De cette façon, la progression du patient peut être évaluée à l'intérieur d'une même séance, d'une semaine ou d'un mois.

L'évaluation sommative se pratique à la fin, au terme du programme complet d'entraînement. Elle consiste en une batterie de tests nommés les MAC CONCEPTION. C'est un équivalent français des MAC BATTERY TESTS que nous avons créé et qui répond aux mêmes exigences tout en respectant les aspects linguistiques du français. Le but de l'évaluation sommative par le biais des tests MAC CONCEPTION est de mesurer la perception auditive du patient. Ces tests ne visent pas une mesure des progrès suite à un entraînement spécifique, mais plutôt le résultat d'un état de situation vécue et pratiquée sur une longue période de temps. Ils sont utilisés pour apprécier la perception auditive du patient entre deux moments précis : avant et après l'entraînement. Ces tests sont présentés avant l'intervention chirurgicale et après l'entraînement. On peut ainsi comparer l'évolution de la perception auditive du patient. D'un point de départ qui est caractérisé par une surdité bilatérale totale (niveau de fonctionnement = 0), le patient progresse à un niveau de fonctionnement tel qu'il peut obtenir une certaine forme de discrimination avec la prothèse auditive.

2.1. Critères linguistiques

Les critères linguistiques de l'évaluation ont été déterminés lors de la mise en place du protocole. Ils visent à évaluer, le plus adéquatement possible et selon divers aspects, la performance du patient face à sa nouvelle perception auditive. Les critères ont été choisis selon les caractéristiques et les paramètres oraux de la langue française au point de vue linguistique. L'analyse est régie selon le principe de hiérarchisation des groupements de la plus petite unité vers la plus grande, de fait, une analyse à plusieurs niveaux.

En plus des éléments phonétiques, nous évaluons les éléments prosodiques (débit, rythme et intonation). Pour les éléments prosodiques, l'analyse ne se fait qu'à un seul niveau (valeur sémantique).

L'évaluation pour les éléments phonétiques et les éléments prosodiques permet de mesurer à la fois l'identification des unités isolées et la compréhension globale du message linguistique. Elle s'applique bien à cause de la démarche analytico-globale du protocole d'entraînement car pour chaque catégorie d'éléments analysés, il y a toujours un élément analytique et un élément global. C'est ce qui

permet de vérifier l'intelligibilité du message et d'apprécier plus justement les écarts enregistrés. De plus, les critères d'évaluation permettent une analyse objective, rigoureuse et scientifique de la perception auditive du patient, du moins par les réponses qu'il propose aux stimulus qui lui sont acheminés.

3. RÉSULTATS

Le tableau 1 présente la moyenne des résultats obtenus par 9 patients avec un appareil de type NUCLEUS pour les évaluations formative et sommative. Notons que la performance des patients est plus élevée à l'évaluation formative qu'à l'évaluation sommative. Cette différence pourrait s'expliquer du fait que lors de l'évaluation formative, le patient est entraîné sur un contenu déterminé et limité : il connaît bien le matériel sur lequel il sera évalué. Pour l'évaluation sommative, le patient n'a reçu aucun entraînement préalable, et n'a aucune idée du matériel qui lui sera présenté. De plus, pour être concordant avec le principe des MAC BATTERY TESTS, tous les tests présentés au patient lors de l'évaluation sommative (nos tests MAC CONCEPTION) sont pré-enregistrés sur cassette contrairement à l'évaluation formative où les éléments sont présentés de vive voix au patient.

Tableau 1. Résultats aux évaluations formative et sommative

Catégories d'exercices	Critères d'évaluation	Évaluation formative	Évaluation sommative
		Avant opération	Après entraînement
Voyelles	son	90,80 %	36,94 %
Consonnes	son	93,22 %	80,16 %
Monosyllabes	mot	51,08 %	14,44 %
Dissyllabes	mot	49,81 %	57,80 %
Phrases	phrase	71,40 %	28,15 %
Prosodie (intonation, rythme, débit)	valeur sémantique	83,57 %	88,30 %

Ces mesures et ces évaluations sont pour nous d'un grand intérêt. Elles ont pour but d'objectiver l'efficacité de l'orthèse et de comparer les résultats avec les divers appareils sur le marché par l'application d'un processus d'apprentissage et de mesure qui satisfait à une véritable évaluation. C'est aussi par le biais de l'analyse phonétique et linguistique que nous pourrons transmettre une appréciation du fonctionnement de l'appareil, notamment aux ingénieurs qui le conçoivent. Cette appréciation pourra les guider lors de l'ajustement et du perfectionnement de l'appareil.

À la lumière des recherches, nous savons qu'il y a encore beaucoup de chemin à parcourir dans le domaine de l'implant cochléaire. L'expérience acquise a démontré qu'il est important de s'ajuster aux besoins du patient et non l'inverse. Nos perspectives futures porteront donc sur la possibilité de mieux connaître et d'ajuster plus efficacement l'entraînement auditif aux besoins du patient et idéalement, de réduire cet entraînement au fur et à mesure des succès et des progrès apportés par des technologies plus poussées. De plus, nous croyons que c'est par l'expérimentation de diverses approches didactiques que nous réussirons à répondre adéquatement aux besoins du patient, faisant de lui une personne des plus autonome dans notre société d'entendants.

IMPLANT COCHLÉAIRE ET PHONÉTIQUE : RÉSULTATS DU SUIVI D'ENTRAINEMENT A LA PAROLE

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Notre groupe est intéressé à mesurer l'efficacité de communication orale à l'aide de l'implant cochléaire. Le point de vue adopté est celui de la linguistique, tout particulièrement de la phonétique. Il ne s'agit pas d'apprendre le français aux bénéficiaires d'un implant mais de les dresser à utiliser de nouveaux signaux sonores. Formulé différemment, l'objectif poursuivi vise à savoir si les différents éléments oraux de la langue sont perçus plus ou moins aisément dans divers contextes de communication : mentionnons à titre d'exemples, l'identification des voyelles et des consonnes, la reconnaissance des syllabes, la compréhension des mots et des phrases, l'exploitation des phénomènes prosodiques, etc.

Treize patients ont suivi un entraînement systématique (65 séances de deux heures chacune basée sur un programme d'apprentissage se développant de l'analytique au global) à écouter et entendre à l'aide d'un implant cochléaire NUCLEUS. À partir des résultats obtenus au cours de la réadaptation de trois mois, neuf de ces treize patients sont apparus comme constituant un groupe homogène. Nous les avons suivis durant deux ans, en leur faisant passer cinq tests d'évaluation à des intervalles de 3, 6, 12, 18 et 24 mois. Notre objectif spécifique : est-ce que ces patients progressaient ou régressaient durant les deux années suivant la fin de leur rééducation ? Quels éléments phonétiques et linguistiques sont en cause ?

Les tests utilisés prennent appui sur les modalités de mesure et évaluation habituellement pratiquées en apprentissage des langues secondes. Ici, bien entendu, on se limite à l'entraînement auditif. Ces tests ont été élaborés et validés préalablement chez des entendants comme chez des malentendants et, sans vouloir entrer dans les détails mais pour vous permettre de vous situer, vous pouvez y voir une parenté importante avec la structuration du MAC BATTERY TESTS; ils étaient bien entendu élaborés selon des caractéristiques descriptives connues de la langue française.

Nous avons fait la sommation des résultats des tests administrés à ces neuf patients (Tableau 1). Un examen rapide vous permettra de constater l'évolution des résultats en pourcentage pour l'ensemble des patients au cours des cinq séances d'évaluation.

Tableau 1. Résultats obtenus aux suivis (%)

Contenu linguistique	Nombre d'éléments	Suivis				
		# 1	# 2	# 3	# 4	# 5
Discrimination vocalique	360	60,0	52,2	53,9	55,9	52,2
Discrimination consonantique	252	90,5	85,7	83,3	86,2	88,5
Identification de monosyllabes	180	33,9	23,9	28,9	30,6	29,4
Identification de dissyllabes	220	27,3	25,0	31,7	35,6	22,2
Intonation	108	89,8	78,7	80,6	70,8	78,7
Repérage de l'accent	135	91,9	94,8	97,0	91,7	96,3
Vitesse de débit	90	100,0	97,8	98,9	100,0	98,9
Rythme (nombre de syllabes)	220	91,4	86,4	75,0	74,5	71,8
Phrases - Appareil	135	43,7	50,4	51,1	58,3	48,9
Phrases - Lecture labiale	135	60,0	65,2	80,0	83,3	83,7
Phrases - Appareil + Lecture labiale	135	93,3	91,9	97,8	98,3	97,8
Différenciation de dissyllabes	180	93,3	93,9	93,9	95,6	89,4
Lecture minutée	600	55,05	59,92	60,73	52,84	44,89
Identification de voyelles	116	71,6	72,9	59,2	52,3	53,1
Identification de consonnes	170	67,6	68,8	51,0	48,5	50,8

Pour vous aider à mieux visualiser les variations dans le temps et en même temps selon la nature des contenus linguistiques des tests, le tableau 2 présente la vue générale de l'évolution, des pertes les plus importantes décroissant graduellement jusqu'au gains majeurs.

Tableau 2. Évaluation qualitative des gains et des pertes

Contenu linguistique	Gains et pertes	Évolution
Identification de voyelles	—	• • • • •
Rythme (nombre de syllabes)	—	• • • • •
Identification de consonnes	—	• • • • •
Lecture minutée	—	• • • • •
Intonation	—	• • • • •
Discrimination vocalique	—	• • • • •
Identification de dissyllabes	—	• • • •
Différenciation de dissyllabes	—	• • • •
Identification de monosyllabes	—	• •
Discrimination consonantique	—	• •
Vitesse de débit	—	•
Accent	+	•
Phrases - A	+	• • •
Phrases - A + LL	+	• • • •
Phrases - LL	+	• • • • •

Quels sont les résultats obtenus ?

- Notez tout d'abord que dix des quinze éléments linguistiques analysés affichent des régressions importantes à négligeables (de l'identification des voyelles à la vitesse de débit).
- Cinq aspects linguistiques examinés seulement montrent une amélioration de performance. Il vaut la peine de les nommer : la reconnaissance de l'accent, des phrases avec appareil seul, des phrases avec support visuel (ou lecture labiale) et des phrases en lecture labiale seule.
- Il est essentiel de faire observer que les améliorations relevées touchent principalement les unités linguistiques les plus usuelles (les phrases) au détriment des unités détaillées et isolées (les sons, les syllabes et les mots, etc.).
- Par-dessus, et c'est peut-être étonnant de prime abord, les phrases à comprendre en lecture labiale seule sont l'item qui a le plus progressé.

Quels enseignements pouvons nous tirer de ces résultats ?

Le programme d'entraînement autidif a insisté de façon prioritaire sur les unités fondamentales comme le phonème (consonnes et voyelles), les syllabes et les mots isolés dans le but de reconditionner les patients à utiliser les signaux sonores. La phrase, à travers des dialogues ou des expériences *in situ*, qui constitue le contexte naturel de communication usuelle, n'a pas été en reste. La phrase jouant un rôle majeur en communication se voit améliorée parce qu'en quelque sorte naturellement renforcée par l'usage quotidien de l'implant cochléaire, sans que cela exige que l'on entende nécessairement et en détail toutes les unités phonétiques qui la composent.

Nous fonctionnons et les implantés fonctionnent comme nous tous : nous déchiffrons les messages par la reconnaissance d'ensemble signifiant; nous faisons appel aux détails (syllabation, épellation, écriture, etc.) plutôt de façon ponctuelle, si nécessaire.

Une surprise au tableau : le plus grand changement s'est fait à travers l'amélioration de la lecture labiale lors de la compréhension des phrases. On aurait pu imaginer que l'audition restaurée aurait entraîné chez les bénéficiaires une moindre exploitation du support visuel, et dans leur cas, de la lecture labiale. Une analyse plus approfondie des résultats sous cet angle montre en outre que le développement de la lecture labiale (en dépit de l'usage valable de l'implant depuis plus de deux années) entretient un étroit rapport avec la durée de la surdité. C'est un sujet qui sera à scruter plus attentivement et qui devrait ne pas faire oublier que le but à atteindre serait de changer le comportement des sourds implantés.

LATIN AND VERNACULARS IN THE 18TH CENTURY

A. VIANA

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The sociology of language has traditionally been devoted to empirical studies or local surveys, and, unlike to general sociology, has attention to theory. Likewise, history has not been one of its interests of research. On the other hand, the history of specific languages as normally presented in the European tradition lacks generality. The analysis of historical and political factors that active in the promotion or recession of linguistic varieties are limited by national aims. Particular histories of languages need a comparative approach. Comparisons may bring to light general tendencies and coincidences in time.

In this respect, the role of Latin is crucial, as is usually stated, due to its character as first European *interlingua*. But problems arise when we come to a closer examination because there is no history of Latin in the modern period, nor even a specific dictionary. Although traditionally the main interest has been in medieval and ancient periods, the production in Latin continued (irregularly) during the eighteenth century. One of the intriguing questions here is to find a coherent explanation for its decline. At the same time, some European vernaculars acceded by then to formal uses, adopting different positions with respect to uses of Latin, which until then had been the main language for wider communication.

We can approach the coexistence of Latin and European vernaculars in the eighteenth century in two different ways: first of all, by setting the relegation of Latin against the more general background of *language shift*; then, by posing the question in functional terms; for instance, asking how communicative purposes are better achieved. In specialized literature, the relegation of Latin is mostly discussed with regard to the spreading of general education and literacy, but these activities force us to consider too languages other than Latin that rely on very different written traditions. We should look first at how the decline of Latin fits our theories of language shift, and what its basic implications could be. Perhaps a fair remark to start

with could be that language shift has not only to do with small communities or isolation, but can also take place in wide networks of communication, in which a fast spread is assured. The Latin language in sixteenth and seventeenth centuries was exactly the kind of specialized network that assured a spread and exchange of ideas.

My second point draws on a well-known statement attributed to Max Weinreich about armies and navies in relation to language borders and language definitions. Here we are confronted with the opposite case: the core of Latin is books and readers, and written texts are the accepted material which standard languages are made. Sociolinguistics reminds us of the role of cultural elaboration in the definition of languages. It seems fair to put all these books in the right place and to realize what our opposite case means: there have been languages used only for public purposes, with no colloquial counterpart. These languages are also a proper target of linguistic shift. Posing this in terms of speech communities, it means that we are dealing with adoptive linguistic communities, their members also being members of some other native speech communities. I have found no sound sociolinguistic description of what could be called speech communities for special purposes, contrasting with native or ordinary linguistic communities. The main point is that in the two cases the organization and the aims of the groups will differ significantly.

Of course, wider communication requires a good deal of material support, and it has to provide the means to cover distances. This is my third remark. The main point is that changes in the sociocultural structure carry away changes in the material supports and in the means of covering distances. Therefore, changes in one domain can bring on language shift processes. In this respect, the relegation of Latin in the eighteenth century goes along with the death or the serious boundary retreat of some European languages. The geographical retreat is well represented by the Celtic family (see for instance Williams, 1988, for Gaelic and Breton), and it is also the case of the Basque speaking area. Likewise, in the Romance family, written production in Catalan reaches its lowest level during this century. These apparently marginal processes follow the promotion of main written European vernaculars as well as the relegation of the common language.

The complexity of material support is a basic feature of any learned language. without a colloquial, everyday counterpart to assure their transmission, learned languages are only active in cultural practice. Applied linguistics studies the organization and diversification of material efforts devoted to this practice. Kelly (1969) showed us the historical dimension of language learning, and particular grammarians like Chevalier (1968) have stressed the role of auxiliary materials in cultural transmission and literacy. The weight of this dimension perhaps can explain why Latin in the modern period is used mostly by people who are not from Romance countries. A greater or a lesser degree of difficulty in grammar is not the only argument

we must use when we consider linguistic decline.

My fourth remark has to do with Bernstein's framework. Learned languages are used as elaborated codes, in the Bernsteinian sense. This is consistent with the lack of a colloquial counterpart, and the need of auxiliary and applied techniques to improve their knowledge. An elaborated code is a framework within which great concerns and values can be expressed. It is also the way to transmit specific knowledge from one generation to another. A clash of generations can be viewed as the collapse of one particular elaborated code. Then a whole range of related interesting topics cease to be interesting. The eighteen-th century undergoes this big collapse with the *Querelle des Anciens et Modernes*. The discredit concerned mainly what was to be learned in the future, the contents of cultural transmission. The *Querelle* cast serious doubts on the topics and values of cultural transmission. Apart from its importance for the start of new forms of knowledge, the *Querelle* was the framework within which the contents associated with the Latin language were discussed and relegated. Latin as an elaborated code had lost there its main argument: the relevance of discourse.

My fifth remark has to do with the perception of the problem. I think that the final shift from Latin to vernaculars in the eighteenth century has not been perceived as the breakdown of Latin as a language of wider communication because the different European vernaculars took up this domain very early. However, at least Antoine Meillet, in *Les langues dans l'Europe nouvelle* (1928), devoted a chapter to *Les langues savantes* and noticed the possibility for them to be relegated. The coherence he shows in approaching this topic can be contrasted with his approach to the minority question, which is resolved as a dialect problem.

There are many open questions to be analysed that will be understood in future research. Our sociolinguistic notions and practices are set in a framework that is taken for granted without more examination. The growth of a notion like *dead language*, bound to the first European *interlingua* is also related to the growth of literacy and the review of the past. The decline of a learned language must have broad implications for our sense of what a culture is.

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SÉANCE DE CLÔTURE / CLOSING SESSION

R.H. Robins, President of CIPL

University of London, London, ENGLAND

Mesdames, messieurs, ladies and gentlemen

I had intended at this session de clôture to express my thanks to my loyal and so friendly and efficient colleagues as I layed down my office as President of CIPL. I can be more brief because my dear colleagues have more or less dragged me back into office for the next five years. And I can only appreciate the confidence that they have so kindly expressed in my presidency. But we are facing a great loss, in that professor E.M. Uhlenbeck, after a period of service as secretary general, has decided that he should now retire, not from active scholarship, not from active participation in CIPL matters, but from the very arduous and very time consuming duties as our general secretary.

I have already spoken at the general assembly of the debt that we all owe, in CIPL, to professor Uhlenbeck. I could repeat and extend what I then said here and I would much like to do so but I know that professor Uhlenbeck himself would not wish me to do so. And if there is one thing that presidents, chairmen, even heads of departments do learn is: do what your secretary tells you. So I will do what Bob Uhlenbeck, as I call him and I will say no more than that the state of CIPL, in terms of its finances, in terms of its membership and in terms of its *Bibliographie Linguistique* has improved greatly as a result of professor Uhlenbeck's efforts.

Now a congress like this serves a number of purposes: social, academic, and as we enjoyed our Wednesday break, touristic. We needen't be ashamed of meeting new friends, old friends and visiting new and agreeable parts of the world. It also serves, academically, for the exchange of theoretical and methodological principles and for a review of current theoretical positions particularly looked at in the light of the five years that have elapsed since the

previous congress. I need say nothing further about that because my colleagues on my left and my right have both done so elegantly and clearly. But I must refer now to some thing that is of very great importance to CIPL and was the subject of our first plenary session.

CIPL has taken on an additionnal task to those that it already filled, fulfills and which it must continue to fulfill, if the health of our subject is to be maintained. It has taken on an additionnal task of responding to widespread feeling, conviction that the languages of the world spoken by minorities, some endanger these languages by being overwhelmed by their more powerful neighbours, must receive very serious attention of the linguistic community. And the linguistic community effectively means CIPL. But we are not alone in this consideration. We are acting in response to a UNESCO resolution, which I shall read to you in a moment, and remember that CIPL is, through the efforts of a previous secretary general, professor Christine Morman, who secured, after the end of the second World War, the inclusion of CIPL within the overall coverage of UNESCO, from which we greatly benefit.

But it is not only UNESCO, quite independently, the Journal of Linguistic Society of America, published an important and lengthly article a few months back, I believe in the latest issue, the latest issue that I have received, an article on endangered languages. There has been a book prepared which was given to all of you when you registered, which may give something of the picture of the great need that there is for attention by linguists. And quite independently it happens that next year in *Upsala*, the *Academia Europaea*, which is not specifically a linguistic organization, but in fact is a general scientific and cultural group of people. In their meeting in *Upsala*, in the early summer of 1993, we'll be discussing, among other things of course, the problem of endangered languages. And next year has been declared by UNESCO the year of indigenous peoples. The resolution put forward on behalf of UNESCO was read and unanimously approved by the general assembly of this congress, CIPL held a few hours ago. For those who were not present at the general assembly meeting, I shall read out the resolution. Its implementation, its interpretation and the work that it imposes will be the duty of your incoming executive comity. And we certainly wish them well in this work. I read now the resolution.

«As the disappearance of any one language constitutes an irretrievable loss to mankind it is for UNESCO a task of great urgency to respond to this situation by promoting, and, if possible, sponsoring programs of linguistic organizations for the description in the form of grammars, dictionaries and texts, including the recording of the oral literatures of hither to and

studied or inadequately documented and dangered and dying languages.»

This is a burden and a duty which rightly belongs to CIPL. And CIPL through its assembly and its executive comity will endeavor to fulfill these duties to the maximum effect. And of course we look to support from academies and universities and other institutions all around the world.

Mesdames, messieurs, nous avons participé à un congrès excellent et important, et nous en conserverons des souvenirs très heureux. Nous offrons nos remerciements les plus sincères au recteur de l'Université Laval, au professeur Auger, au professeur Hirtle et à la professeure Marie Surridge et ses collègues, mais aussi aux organisateurs et organisatrices et aux assistants et assistantes qui ont rendu notre séjour au Québec si agréable. Maintenant nous aussi nous pourrons dire «Je me souviens».

SÉANCE DE CLÔTURE / CLOSING SESSION

Victoria Fromkin

UCLA, United States

In trying to think of what to say to summarize this important and intellectually stimulating congress, I looked through the final program. As I did so I remembered a saying which I learned when I was in China in 1973 with the first US linguistic delegation -- "Women hold up half the sky". This came to mind because I noted that at this congress, women seem to be holding up more than half the sky; nine of the thirteen plenary speakers were women, the largest number of any Congress and the first time that women were the majority of invited speakers. For this we must thank Marie Surridge and the Program Committee which she Chaired for breaking the barriers of the past in recognizing the role of women in linguistics. And I think it is most fitting that at this time we also announce the happy news and congratulate Dr. Surridge on the birth yesterday of her new granddaughter.

It is sixty-five years since the first CIPL Congress met at the Hague. Our congress this week has shown that we have come a very long way since that first meeting. Linguistics has expanded into new fields, new subfields, and into new inter-disciplinary research. But we have also continued the same traditions as the linguists who came before us. As Newton has said: "We are who we are because we stand on the backs of giants."

Last night I sat and listened to the panel chaired by Fritz Newmeyer discussing the thirty years since the 1962 congress, the congress at which, it is said, Noam Chomsky lit the flame that brought on a scientific revolution. In his opening talk, Newmeyer referred to three questions which Chomsky raised at that congress. Whether you agree or disagree with Chomsky, believe yourself a generativist or an anti-generativist, a formalist or functionalist, the questions that Chomsky raised are questions in which every linguist has a stake: they are questions which form the essence of our discipline.

The first question raised is: What constitutes the nature of human language? In his report this morning Professor Hagège asked another

question: "Why do linguists use the term grammar?" The answer to this question is closely related to the one posed by Chomsky. In the last three decades, the term grammar is used by a large number of linguists to refer to the system of linguistic knowledge that permits all speakers of a language to speak and understand each other. Thus we mean by grammar, not syntax alone, but all of what is contained in the knowledge of our language and how it is represented in the mind. It is the nature of this grammar that we seek to understand, not only the grammar of a particular language but the underlying principles which pertain to all human languages.

It was once thought that a fundamental aspect of human language in use was the production of sounds by the vocal tract and the auditory perception of the acoustic signal produced. A meeting which I attended just before this Congress -- the Third International Conference of Theoretical Issues in Sign Language Research -- shows that we must discard this notion; it is now clear that the set of all possible human languages includes the sign languages used by the deaf throughout the world, that sign languages are governed by the same constraints and the same principles and acquired in the same way as spoken languages. This would have been unthinkable at that first congress sixty five years ago. Over two hundred linguists attended the sign language conference, including interpreters of American Sign Language, Italian Sign Language, Austrian Sign Language, and Japanese Sign Language. These interpreters were needed since speakers of different sign languages can not understand each other just as, unfortunately many speakers of English cannot understand the speakers of French at this congress. Yet, the linguistic research on sign languages support the view of the medieval scholastic, *Roger Bacon*, who stated in the 13th century that "Anyone who knows the grammar of one language knows the grammar of all languages except for accidental differences." The more we seek to find the answer to the first question raised by Chomsky, the more we find that Bacon was correct, that all languages are basically the same "except for accidental differences."

If this is so, what makes all languages similar, constrained by universal principles? One answer to this question relates to what has been called the innateness issue. To posit that human languages are in a basic sense similar because they are constrained by genetically determined, innate, biological principles is rejected by some linguists. Some feel this is an absurd position. Yet these very same individuals do not think it absurd that different varieties of birds are preprogrammed to sing the particular songs of their species and no others, and that all bird songs are similar in very basic ways, different for example from the cries of wolves or the mewing of cats. I have never heard anyone question the innateness of birds' 'languages'. It is no more absurd to suggest that the human brain is constructed such that it permits us to acquire and represent and use languages of a certain type.

The research into the nature of the brain/language interface represents one of the new areas of linguistics that has arisen in the last half century --

neurolinguistics. When *Paul Broca*, a French neurologist convinced his Parisian audience in 1861 that "nous parlons avec l'hémisphère gauche", he stimulated research in the attempts to 'localize' a language center in the brain. Linguists today are making a major contribution to this research. Neurologists, neuropsychologists, aphasiologists and linguists are all working together. This relates to another question that has been discussed at this congress: the autonomy of linguistics. (This, of course, is different from the question of the autonomy of language, its independence of other cognitive systems or of cognition in general. This is a very important question and also one which is now on the linguistic agenda in the attempt to understand the nature of language.) Linguistics has a special contribution to make to the work on the relationship between brain mechanisms and language (and other cognitive systems). Neurologists are uncovering the neuronal networks underlying the brain's capacity to acquire and store and use languages, but they do not know what questions to ask about the linguistic system which is being acquired. Because of our linguistic research we are able to raise these questions in our work with them. And it is recognized that we have something to offer neurology just as linguists should recognize the contributions of neuroscience to linguistics. They can not tell us whether X-bar theory or Montague Grammar are viable theories for language; but they may in time reveal the neural nets which are used in applying whatever theory is shown to be explanatory.

The second question raised by Chomsky at the 1962 congress was: "How is it possible for the child to acquire the complex grammar which represents the knowledge of language?" This question was discussed in many of the papers at this congress, the papers presented by linguists working in the area of language acquisition and psycholinguistics. It is a question also of interest to neurolinguistics since again many researchers believe that the child does not enter the language learning task with a blank slate but with what has been termed Universal Grammar or UG. While this term, like the concept of innateness, raises the hackles of some linguists, the search for the constraining principles with which we are born, occupies a growing number of linguists today. There appears to be some confusion as to what is meant by Universal Grammar, which simply refers to the human biological language faculty, the principles that are part of all human languages due to the biological makeup of the human organism. This is the grammar Bacon was referring to, those parts of all languages that are identical, i.e. language without the accidental differences. These principles do not have to be acquired by the child, thus making the acquisition task a possible one.

The third question raised in 1962 and reiterated in the symposium was: "How do we put our knowledge of language to use in speaking (signing) and understanding?" This question of language in use has been discussed widely in this congress. It involves language in society, pragmatics (how and when we should say what we say), the historical changes which occur with language in use, and all aspects of language processing (i.e. linguistic performance) which

are not the same as the knowledge of language, or the mental grammar.

The distinction between language and language use is one of great import in trying to answer all three questions already mentioned. This difference is clearly seen by those of us in neurolinguistics working with aphasia patients. If a brain damaged patient is unable to name an object such as a cup, one day, but is able to do so the next, the patient obviously has a processing problem since the stored knowledge is present to be accessed at another time. One can give many such examples but this is a subject for another talk. I mention it merely to illustrate the new areas of research which linguists are working on all over the world, areas which were not the subjects for papers at the first congress.

Like our colleagues at that first congress, linguists continue to work on historical and comparative linguistics, descriptive studies on individual languages, and theories of syntax and phonology and phonetics and morphology. Not only did the work on syntax mushroom in the last three decades, we now also find a serious increase in the number of our colleagues working in the area of semantics, which, for many years seemed to be outside the scope of linguistics. Yet it was Jacobson who many years ago said "language without meaning is meaningless" which is why the new developments in semantics as discussed by a number of our plenary speakers are so welcome. And in addition to these traditional areas we have the many new ":hyphenated fields" of mathematical linguistics, computational linguistics, sociolinguistics, dialectology, psycholinguistics including first and second language acquisition and language processing, neurolinguistics, lexicography, pidgins and creole studies, male and female language research, and the history of linguistics, among others. This is not surprising since the interest in human language is so vast that it encompasses and requires many areas of research if we wish to try to answer the three questions which were discussed in 1962, had been discussed before that congress, and will, undoubtedly be discussed at the congresses to follow in the years to come.

I was asked to speak for just a few minutes to summarize the congress. I am sure you can understand why I did not try to accomplish this very difficult job in the time allotted to me. Instead, I have tried to show what unites us, how we are all trying in our own way, using our own methods, and our own theoretical approaches to understand the nature of human language. This is what makes us linguists. I hope to see you all at the Congress in 1997 when I am sure we will have gained new insights into the questions of concern to us all. . Thank you very much.

FINAL SESSION RESUME OF CONGRESS

John Hewson

Memorial University of Newfoundland

Voici le cinquième Congrès International des Linguistes auquel j'assiste. J'étais au Congrès de Boulogne en soixante-douze, de Vienne en soixante-dix-sept, de Tokyo en quatre-vingt-deux, et de Berlin en quatre-vingt-sept. Ce qui m'amène à faire cet après-midi un essai de bilan sur le progrès de la linguistique (ou peut-être devrais-je dire sur les cheminements de la linguistique) des dernières années. J'essayerai à faire aussi un commentaire sur ce qui s'est passé dans ce Congrès de Québec, en enfin de donner un aperçu sur ce qui reste à faire, à partir de ce congrès, pendant les années quatre-vingt-dix, en ce qui nous reste du vingtième siècle.

We live in an age of convergence. The generations that preceded us lived in an age of divergence. It was normal in the past for languages to split into dialects, and for these dialects to become, with the passage of the centuries, differentiated languages. In Newfoundland, where I live, the fishing villages used to be as remote as the arctic islands are today, and we have seen, in 400 years of European occupation, the development of different regional dialects of Newfoundland English. Now with the advent of radio and TV the distinctive dialects of Newfoundland are gradually disappearing into the North American melting pot. Disappearing in the same way, of course, are the many aboriginal languages of the world, just at a time when speakers of these languages are presenting themselves as university students in search of higher education, and when there is a need to provide them with a higher education that will respect the integrity of their communities and their cultures. I have spent considerable energy in the last twenty years recording the last speakers of Newfoundland Micmac, and providing grammatical and lexical materials for the young native speakers of Cape Breton Micmac, the first generation of whom are now beginning to graduate from university. I can readily identify, therefore, with the speakers of the first plenary session: there is an enormous need of trained personnel to help aboriginal peoples prepare the materials that are necessary for their educational needs. This must be done at their request; they must be masters of their own destiny. The TV that is reducing our cultures to a common melting pot is also a very aggressive

students as linguists and language teachers is a priority that confronts us all.

Nous habitons un monde où la convergence crée des problèmes de grande envergure. Ce matin, en effet, nous avons eu un petit drame qui souligne les problèmes que soulève la convergence linguistique, phénomène maintenant mondial. Au Congrès de Boulogne, en Italie, en mil neuf cent soixante-douze, par exemple, les deux séances plénières du samedi se sont déroulées entièrement en italien, sans aucune traduction. Voilà une grande différence pour les Congrès de Linguistique depuis simplement vingt ans.

We live in an age of convergence, but I think we can be glad at the degree of theoretical convergence that has characterized this congress. I remember some sessions of past conferences as being a vast disappointment in this regard. Interesting questions were often raised, but the result was frequently un dialogue des sourds, a dialogue of the deaf, where neither side really listens to the other. We had three major plenary sessions that examined different theoretical points of view, and that provided much interesting discussion, and much material to reflect upon. There were also papers in the different subsections which pointed out how different theories are often different ways of saying the same thing, and made attempts to delineate, by looking at different syntactic theories, what essentials, what parameters, a theory of syntax must have. In this way, instead of spreading into a further divergence of what Maurice Gross has called "la frénésie des modèles", we are perhaps beginning to take our scientific responsibilities seriously, and to work towards a fundamental view of syntax that the majority of linguists could recognize as acceptable.

Since I am the one who asked that mischievous question on the autonomy of syntax at the second plenary session, I want to explain that I did so deliberately to provoke discussion on a subject that has so far been mainly divisive. The responses were suitably measured, with a clear indication that there cannot be a simple answer to the question. Obviously there are many different factors that influence and determine syntactic structures, so that any kind of simple autonomy is out of the question. And yet a fundamental problem remains: when the child reaches the two word stage in language acquisition, whereby one word is predicated of the other, what exactly is this syntactic relationship that is created? What is this step that other animal species seem to be incapable of taking? Does the adding of one meaning to another in this way represent a new meaning? If so, it is a meaning of a different kind from lexical meanings and morphological meanings. The effect of the grammatical structure is nevertheless meaningful, as we see from hundreds of minimal pairs in English: a lamp table is not a table lamp; a company bus is not a bus company; a lead pencil is not a pencil lead.

The question of the separation of syntax and semantics is of course related, and also merits more profound examination. The fundamentals of the question are already spelled out by Saussure in the indivisible duality of the linguistic sign. If we use Hjelmslev's useful terms content (for the semantics) and expression (for the morphosyntax), it is obvious that already in the 1930's Hjelmslev and Jakobson and other Europeans were intent on finding the grammar of a language in the content, in systems of meaning, thereby following Saussure's original intent and his notion of valeur.

At the same time in North America, however, there was the attempt, especially under the influence of Bloomfield, to find system in the directly observable morphology itself. In Saussure's game of chess, this would be like trying to find system in the directly observable chess pieces rather than in the moves that the chess pieces make. This dichotomy is still with us, because the proponents of Cognitive Linguistics insist that grammatical systems are content systems, whereas those of the generativist persuasion believe that grammatical systems are expression systems. They cannot both be right, and if we are concerned about our discipline, some effort must be made in the next decade to resolve the issue. We cannot afford to continue the dialogue of the deaf.

Let me give some initial impetus to the debate. Gustave Guillaume, in Volume I of the Leçons de Linguistique, points out that there is system to be found in both content and expression, but whereas system in content is coherent, system in expression is less than coherent: typically in a morphology, for example, we find irregularities. English irregular plurals, such as geese, mice, however, are just as regular in terms of plural notion as are the plurals of cats, dogs, horses, with regular morphology. Returning to Saussure's analogy of the game of chess, we note that all the pawns look alike (expression system) and all the pawns move alike (content system). It is Hjelmslev who makes the observation that any of the pieces may be replaced without changing the game. The suggestion here is that the content determines expression, and that the linguist must take both the content system and the expression system into account, and not promote one at the expense of the other.

This conference also reflected another trend of the last twenty years: the drift away from sententialism, from emphasis on the sentence, to emphasis on the word. With the disappearance of transformation in the early 70's, for example, we have seen a tendency to shift explanations from facts about constructions to facts about words, and even to talk about the fundamentals of syntax in terms of grammatical relations rather than in terms of constituent structures. Emphasis upon the sentence was introduced into North American linguistics by Bloomfield,

whose influence has gradually waned with the rejection of Behaviourist principles. But some of Bloomfield's definitions still remain, unfinished business that still needs to be examined, such as the definition of a language as a set of sentences, that Bloomfield took from the early Wittgenstein. If we all agree that children learn a language, and we then define a language as a set of sentences, then it follows, by a simple syllogism, that children learn a set of sentences, which we know from practical experience to be untrue. Children learn words, and how to fit them together to form sentences. We need to reconsider how a community language might be defined or characterized.

Finally there is the behaviourist dictum that language is rule-governed behaviour. Rules are necessary descriptive devices, which we all use, but we must not make the false conclusion that children learn our descriptive devices. The proposal that children must learn rules in order to speak, in fact, requires us to believe that children learn a metalanguage, a set of rules. We then have to face the problem of how a child who has not yet learned a language manages to learn a metalanguage. These incoherences need to be discussed and clarified so that we do not teach to another generation of undergraduates definitions that are patently unsatisfactory.

My aim has been, in these few brief comments, to indicate that there has been a movement of convergence in theoretical linguistics in the last twenty years. The frenzy of theory making has led linguists to refuse to believe that one theory is right and all the others wrong, and to search for theoretical principles that might be widely accepted. There are many different aspects that have to be incorporated into a complete theory: language is mental, but it also vibrates on the air waves; the language possessed by a speaker is necessarily finite, but its usage has no limit; a language is a personal possession, but it is also in some sense a community possession. The object of study of the science of Linguistics is fascinatingly complex. Let me end, therefore, with a perceptive comment from Gustave Guillaume, that a good linguist must be not only a linguiste de langue, but also a, linguiste de discours. As a linguiste de langue he would know how to analyze the grammatical and phonological systems that are a permanent possession of the native speaker from childhood onwards. And as a linguiste de discours he would not only be a reasonably good phonetician, but also know how to explain usage of all kinds, social and historical variation, functional sentence perspective, and such like phenomena. The range that linguistics covers, even when reduced to its essential core, is a vast one, and we must guard against any form of reductionism that would give us a less than complete picture.

SÉANCE DE CLÔTURE / CLOSING SESSION

Pierre Auger, Président du CIL92

Université Laval, Québec, CANADA

Merci professeur Robins pour ces bons mots, thank you professor Robins for your good words. Messieurs les président et secrétaire général CIPL, chers collègues, mesdames et messieurs, avant de clore définitivement ce XV^e Congrès international des linguistes, j'aimerais vous livrer quelques-unes de mes réflexions touchant le déroulement de cet événement qui prend fin aujourd'hui.

D'abord le congrès aura été un lieu important d'échanges professionnels et amicaux pour notre communauté scientifique. Comme les autres congrès qui l'ont précédé, il aura par son rayonnement médiatique aidé à faire connaître la linguistique et ses travaux parmi la population de notre ville et du Québec en général. CIL 92 a également atteint ses objectifs scientifiques en ayant permis à tous ses intervenants de présenter et d'échanger leur point de vue sur cette vaste discipline, qu'est devenue au fil des ans la linguistique contemporaine. En se rapportant à la séance plénière de synthèse, que viennent de livrer les professeurs Robins, Fromkin et Hewson, il est facile de se rendre compte dis-je que des résultats concrets ont été atteints, notamment en ce qui concerne les langues menacées. Rapidement je vais vous lire la traduction que je viens de faire de la proposition de CIPL pour l'UNESCO.

"Comme la disparition de toute langue constitue une perte irréparable pour l'humanité, il est du ressort de l'UNESCO de réagir rapidement à cette situation en faisant la promotion et, si possible, en patronnant les programmes des organisations à vocation linguistique pour la description, sous forme de grammaires, dictionnaires et textes - incluant les enregistrements des littératures orales -, des langues non-

décrivées ou insuffisamment documentées, les langues menacées ou en voie d'extinction."

Un tel plan de travail pose des défis importants pour notre profession dans les prochaines années, particulièrement en termes de mission sociale. Le thème général du congrès, les langues menacées, a été reçu avec un intérêt et un enthousiasme certain par les médias, et comme j'exprimais dans mon allocution d'ouverture, cela n'est pas étranger aux préoccupations sociales relativement nouvelles des Québécois et des Canadiens à cet égard. Il est à espérer qu'au-delà des recommandations visant à préserver ou à renforcer les langues menacées, des gestes concrets soient posés, pour promouvoir le statut de ces langues et décrire leur corpus.

Finalement, je voudrais remercier sincèrement tous ceux qui ont contribué de près ou de loin au succès du CIL 92, les participants, les évaluateurs des conférences, les conférenciers, les présidents de séances et de sections, les animateurs de tables rondes. Un merci tout particulier à Marie Surridge pour le programme et à son équipe d'évaluateurs, également à Vicky Fromkin dont les avis ont été très précieux. Je remercie aussi, bien sûr, mes collègues du comité d'organisation: Silvia Faitelson-Weiser, secrétaire générale, et Walter Hirtle, vice-président, aussi mes collègues Jean-Claude Boulanger et Conrad Ouellon du comité des publications, René Lesage du comité d'exposition de livres, Jean-Louis Tremblay du comité d'accueil. Merci aussi à notre collègue Denise Deshaies, directrice du CIRAL, pour les services d'administration fournies par son personnel. Merci aussi au Comité international permanent des linguistes, à son exécutif, je salue ici les professeurs Robins et Uhlenbeck, et à ses représentants internationaux; sans leur aide soutenue et leur précieux avis, il aura été impossible de prendre en charge adéquatement l'organisation d'un congrès d'une telle ampleur. Enfin je tiens à souligner ici le travail admirable accompli par les employés du secrétariat du CIL '92. Un merci tout particulier à André Crochetière et à ses adjointes Gynette Tremblay, Monique Proulx, Guylaine Belcourt et à madame Dorothy Roy de l'administration du CIRAL, à toute l'équipe des étudiants gradués et non gradués; leur enthousiasme et leur détermination ont assuré le dynamisme de cette minutieuse opération. Je ne voudrais pas oublier enfin toutes les organisations qui nous ont subventionné ou aidé dans la préparation de ce congrès. Je les remercie pour la grande générosité dont ils ont fait preuve à notre égard.

Nous voici donc au terme de ces cinq journées de congrès; journées qui ont été fructueuses au plan scientifique et enrichies d'une amitié sincère qui lie les membres de notre communauté. Je déclare clos le XV^e Congrès international des linguistes de Québec et je nous dit au revoir et au prochain congrès.

Mr. Rector, Mr. President and Mr. General Secretary of the CIPL, dear colleagues, ladies and gentlemen. Before closing this Fifteenth International Congress of Linguists, I would like to share with you my thoughts about this event. First, this congress has been an exciting opportunity for a professional and friendly exchange within our scientific community. Like those earlier congresses, it has, through its exposure to the media, helped make linguistics and its achievements better known to the general public in our milieu. The ICL 92 has attained its scientific objectives allowing all contributors to present and exchange their views on this vast discipline which has grown and changed over the years.

If you refer back to the closing plenary session given by Professors Robins, Fromkin and Hewson, is easy to see that concrete results have been achieved, especially in the area of endangered languages. The text of the CIPL proposition to UNESCO has just been read by Professor Robins. The objectives outlined constitute a challenge for our discipline in the coming years, especially in terms of its social mission. The general theme of the congress "endangered languages", has been received with interest and enthusiasm by the media. And as I mentioned in my opening speech, this theme is not something foreign to the relatively new concerns of Quebecers and Canadians. As has always been hoped that above and beyond the recommendation designed to preserve or reinforce endangered languages, concrete steps will be taken to promote the status of these languages and to describe their corpus.

Finally, I would like to extend my sincerest thanks to all those who contributed from near or far to the success of ICL '92: the participants, speakers, chairpersons and round table organizers. A further thanks to Professor Marie Surridge for the programme and to the members of her evaluation committee. A special thanks also to Professor Victoria Fromkin whose advice was invaluable. Of course, I also wish to thank my colleagues of the organizing committee: Professor Sylvia Faitelson-Weiser, General Secretary and Walter Hirtle, Vice-President; as well as my colleagues Professors Jean-Claude Boulanger and Conrad Ouellet, for the preparation of the proceedings Professor René Lesage, for the book exhibit and Professor Jean-Louis Tremblay, for the reception committee. I would like also to thank our colleague Professor Denise Deshaies, director of the CIRAL, for the administrative services supplied by her staff. Thanks also to the Permanent International Committee of Linguists, to its executive board Professors Robins and Uhlenbeck in particular, and to its National Representatives. Without their support and valuable advice, it would have been impossible to take on and organize a congress of such scope.

I also wish to emphasize the admirable job done by the staff of the ICL 92 Congress Office (secretariat). Our special thanks to André Crochetière

and his assistants Gynette Tremblay, Monique Proulx and Guylaine Belcourt to Mrs. Dorothy Roy of the CIRAL administration and to all the students who were on the team. Their enthusiasm and determination ensured the success of this endeavour. Finally, I would not to forget all the organizations that helped fund the congress or helped in its preparation. I wish to thank them for their generosity.

We have now come to the end of our five day congress which was scientifically fruitful and enriched by the friendship which binds the members of our community. I hereby declare the Fifteenth International Congress of Linguists closed. Goodbye and let us meet again at the next congress. Thank you very much.

**RECOMMANDATION GÉNÉRALE DE L'UNESCO
GENERAL RESOLUTION OF UNESCO**

Lors de l'assemblée générale du Comité International Permanent des linguistes, les participants ont adopté la résolution suivante concernant la survie des langues menacées, l'un des thèmes majeurs du XVe Congrès international des linguistes qui s'est déroulé du 9 au 14 août 1992, à l'Université Laval, Québec, Canada.

At the time of the General Assembly of the Permanent International Committee of Linguists, the participants were adopted the following resolution concerning the endangered languages, the one major themes of the XVth International Congress of Linguists which will take place from August 9th to 14th, 1992, on the Laval University, Quebec, Canada.

Comme la disparition de toute langue constitue une perte irréparable pour l'Humanité, il est de la responsabilité de l'UNESCO de réagir rapidement à cette situation en faisant la promotion et, si possible, en patronnant les programmes des organisations à vocation linguistiques pour la description - sous forme de grammaires, dictionnaires et textes incluant les enregistrements des littératures orales - des langues non décrites ou insuffisamment documentées, des langues menacées ou en voie d'extinction.

As the disappearance of any language constitutes an irretrievable loss to mankind, it is for UNESCO a task of great urgency to respond to this situation by promoting and, if possible, sponsoring programs of linguistic organizations for the description - in the form of grammars, dictionaries and texts including the recording of the oral literatures of hitherto unstudied inadequately documented endangered and dying languages.

Cette résolution est assortie d'un programme de travail pour les linguistes :

This resolution is accompanied with a working program for the linguists:

- 1- Chaque langue individuelle et la diversité des langues humaines sont d'une valeur inestimable pour l'humanité en général et pour la linguistique en particulier.
- 1- Each individual language and the diversity of mankind's languages are of inestimable value to mankind in general and to linguistics in particular
- 2- Nous reconnaissons que la grande majorité des langages humaines sont gravement menacés ou même en train de mourir.
- 2- We recognize that the great majority of mankind's languages are gravely endangered or even dying.
- 3- Par conséquent, les linguistes doivent reconnaître l'obligation urgente de faire face à cette situation de la façon suivante:
- 3- Therefore linguists should recognize their urgent obligation to respond to this situation in the following ways:
 - a) Établir le statut des langues de façon à déployer les rares ressources de façon rationnelle;
 - a) Ascertain the status of languages in order to deploy scarce resources in rational ways;
 - b) Documenter les langues mourantes qui n'ont pas fait l'objet d'une étude appropriée compte tenu de l'imminence de leur extinction, de leur position génétique et de leur isolement typologique;
 - b) Document not yet well studied dying languages according to their imminence of extinction, their genetic position and their typological isolation;
 - c) Travailler au renforcement et à la revitalisation des langues menacées, non seulement par le truchement de la recherche linguistique mais aussi par le contact direct avec les locuteurs de ces langues, pour former du personnel sur place et maintenir des programmes éducatifs et culturels qui pourront promouvoir la

survivance des langues menacées;

c) Work for the strengthening and revitalization of endangered languages, not only through linguistic research but also by working for and with the speakers themselves, to establish and train local personnel and to maintain educational and cultural programs which will promote the survival of their language;

d) Sensibiliser davantage les linguistes à l'imminence et à l'énormité de la perte des langues menacées, encourager les départements de linguistique à donner une formation dans le domaine, à décerner des diplômes, à créer des emplois et à donner des promotions pour un travail en linguistique qui soit approprié à la situation;

d) Raise the awareness of the linguistic profession concerning the enormity and imminence of the loss, and encourage departments of linguistic work appropriate to this situation;

e) Encourager les linguistes à sensibiliser le public en général à cette situation et conscientiser également les groupes linguistiques à la grande valeur de leurs langues et à l'aide que les linguistes peuvent apporter pour les préserver;

Encourage linguists to raise the awareness of the general public concerning this situation, and also to raise the awareness of the language groups concerned that their languages are of very high value and that linguists can help to preserve them;

f) Dans la mesure du possible, les linguistes doivent travailler en collaboration avec les gouvernements pour défendre les législations et les mesures afférentes en vue de la promotion et de la survivance des langues menacées.

f) Linguists should, wherever possible, work with governments to advocate legislation and measures to promote the survival of endangered languages;

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