

CULTURE-DEPENDENT DIFFERENCES IN LANGUAGE AND DISCOURSE STRUCTURES

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A statistical study of written text samples in Russian, Old Church Slavonic, Spanish, Archaic Chinese, and English has shown differences in the *indices of Zero Deicticity* and of *Zero Anaphoricity*. It is suggested that the central factors that underlie these data belong to the domain of culture, namely to the degree of ***Self*-prominence** typical of the specific culture. The languages with greater values of Zero Anaphoricity are classified as **dialogue-oriented.** Certain culture-dependent differences are also demonstrated using the so-called cloze tests.

Semantics, culture, primitives, discourse, deixis, anaphora, speech perception

1. SEMANTICS AND CULTURE: PHYLO- AND ONTOGENESIS

It should be admitted at the very outset that there are practically no structures, either in language or in speech, that are ***in***dependent of culture. I believe, that nobody will blame me if I avoid any attempt at defining culture, yet, it seems safe to claim that language, as such, lies at the foundations of culture. However substantial its innate component might be, each specific language is the outcome of a cultural evolution of that society.

I am afraid, that at this stage of my reasoning I feel obliged to say a few words about the perennial problem of linguistic relativity and of the responsibility of language for thought *or* vice versa. Linguists and philosophers have been discussing this problem for many decades, but the outcome appears rather humble. Yet, the core of the question would come out somewhat more clear-cut in outline, if one chooses to discriminate between **phylogenetic** and **ontogenetic** approaches. It seems rather obvious, that taken from a phylogenetic point of view, the way a language is structured is determined by the structure of the experience and not the other way

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round.[1] Why is it, that, let's say, the Eskimos differentiate between so many varieties of snow, whereas the Burmese language may designate only one word for mist, snow, and even the minute floating particles dispersed by dogwood trees? The answer is absolutely straightforward: the differences, in this case, are motivated ecologically. It is definitely not the language that is responsible for that kind of sensitivity or insensitivity to specific oppositions between referents. It is certainly more difficult to explain why a language would operate with just two tenses, while another one needs five for functioning properly. But, in this case too, the student of the linguistic diachrony would be asked to look for certain, broadly speaking, ecological reasons — for the reasons that pertain to the processes where the mind preprogrammed to deal with any kind of the «Earth-compatible» reality is confronted with just the given one.

The same problem is visualized rather differently, if an ontogenetic approach is adopted. Here every human acquires his or her experience largely «via» language rather than due to a direct interaction with the world. Language is the natural channel that feeds into the individual information accumulated by that particular society. Why, then does an Eskimo infant know that he or she «must» differentiate between *n* varieties of snow, and not between *m* such varieties? Clearly he knows this because there is a precise number of the snow-like items which are differentiated in the speech of adults and older children which forms the input to develop his own language mechanism. This nomenclature, already present in the language, thus shapes his or her worldview, that is to say, his mentality and thought.

This being the case, the two alternatives, viz. «thought precedes language and shapes it» vs. «language precedes thought and shapes it» are both true, but complementarily distributed with respect to phylogenesis and ontogenesis.

One could add, that without even confronting phylo- and ontogenetic approaches, we could arrive at much the same conclusion which boils down to a certain parity between language and mind (or, rather, a way of thinking). As is aptly observed by Lerita COLEMAN, «at the individual level, language operates like proprioceptive feedback, just as facial muscles provide information about emotional states» (Coleman, 1988: 335). In other words, a pleasurable emotion inspires a smile, but, on the other hand, a smile, a purely biological event, may just as well provoke a pleasurable emotion. The case is the same with language: the way the experience is structured finds its reflection in the language, whereas a feedback from the latter contributes to the way the conceptualization of the reality takes place.

It may also be advisable to keep the two angles apart, that is, the phylo- and ontogenetic ones, while discussing the nature of linguistic meaning *per se*. For instance, Anna WIERZBICKA (1990) demonstrates her semantic interpretations of color terms quite convincingly; she argues, particularly, that 'green' is, roughly, the color associated with that of wet grass, leaves or vegetation in general («people may think of such things when they pronounce or hear the word *green*»). It may, however, be doubted, whether people actually — consciuosly or even subconsciously — «think of such things» every time they encounter the word *green*. As a matter of fact here, too, it is, rather, the phylogenetic — or diachronic — viewpoint, that one

[1] At this point of our discussion we are tempted to recall the theoretical claims of the Ancient Chinese thinker Sun Zi according to whom «the mind discerns the similarities and differences among things through the senses (which includes the mind itself, for distinguishing feelings). Once the phenomenal distinctions are known, the task of naming proceeds. Thus, for Sun Zi, the name-referent (*ming-shi*) relation is not one between language and the world. Rather, it is a relation between language and the world as perceived by the mind» (Bao Zhiming, 1990: 211).

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takes when offering interpretations of the above mentioned type: it can reasonably be argued that such is the **origin** of the semantics 'green'. Yet, if a synchronic *or* ontogenetic angle is chosen, the possible interpretation is just this: 'green' is what is called (what people call) *green*.

2. SEMANTICS AND PRIMITIVES.

Two more specific points invite themselves to the arguement. The first is concerned with the fact that, while following the above premise, the semantics of common names is not radically different from that of proper names. We certainly have every reason to argue that, e.g. 'X is John iff X is called (named, referred to as) *John*'. As maintained above, basically the same formula holds true with respect to *green*: 'X is green iff it (that is, X) is called *green*'. The feature that really makes common names different is that their semantics is **decomposable**, i.e. analyzable into semantic primitives (unless a particular name in itself embodies a semantic primitive). This point simply means that the semantics of common names makes up a **structured system**.

The second point we would like to make in connection with the aforesaid, is that the semantic formula referred to above is formally identical to that suggested by Alfred TARSKI and some other logicians, philosophers, and students of linguistic semantics to account for truth conditions, viz.: '*grass is green* is true iff grass is green'. But Tarski and his followers try to «enhance» the classical Aristotelian definition of truth, they try to make it free from any reference to the real world, confining the definition within the language domain — which is hardly legitimate, for they try to force into the realm of culture that which actually lies at the intersection of culture and nature (grass, as such, certainly lies outside culture, it is only its conceptualization, including color-specification, that belongs with culture); besides, as rightly observes Janet FODOR (1980: 33), «as long as what we are concerned with is only truth conditions, ALL true sentences could in principle be assigned the same truth conditions» which entails, for instance, that «*snow is white* means... also that grass is green». Contrary to that, the tautological semantic interpretation of the form 'X is green iff X is called *green*' is quite legitimate, because it directly reflects the conventionality and arbitrariness of the linguistic sign (in the Saussurian sense of the latter term).

On returning to semantic primitives, we would like to suggest here that the primitives are **semantic** universals rather than lexical ones. Cliff GODDARD and Anna WIERZBICKA with their co-authors (1994) do find «exact» lexical matches for all of the postulated 37 primitives in a variety of languages. Usually they extract the desired meaning from an array of those associated with specific words. But, in doing that, they seem to overlook the necessity of distinguishing **polysemy** from **homonymy**. As a matter of fact, only in the latter case is one in a position to claim that a perfect lexical match has really been found. If, however, it is polysemy rather than homonymy that we are actually dealing with, then, by the very fact of its polysemic nature, the word is assigned to another «node» of the system as compared to the necessarily monosemic primitive or to another match found in a different language. In fact, this is the conclusion arrived at by one of Goddard and Wierzbicka's co-authors Nicholas EVANS, who, with reference to the Kayardild language, writes: «the Kayardild evidence suggests that all the primitives... are **semantic universals**, but that some fail to be **lexical universals**» (Goddard and Wierzbicka, 1994: 225).

I don't think I am saying anything new, if I claim that it is just a noble illusion to believe that people — and peoples — do generally get a good understanding of each other. Generally, we

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understand each other to an extent necessary and, hopefully, sufficient enough for a sensible interaction (a semantic residue, dramatically irreducible to words, being always there). This does not reject the thesis that there exists a «psychic (mental) unity of the humankind» but, rather, reasonably restricts it.

If we assume, together with Jerry FODOR (1980) and Anna WIERZBICKA, that semantic (cognitive) primitives are innate, a primitive of any sort, once agreed upon, is to be recognized as being universal simply by definition. Yet, it could at least be suspected that, when entering certain configurations, the primitives can become subject to modifications. An analogy from the domain of phonology can be helpful to make the point clear. When discussing phonology, we have equally just as many reasons to speak of innate (and, hence, universal) primitives which serve as prototypes for phonologically distinctive features. But these bundles (configurations) of distinctive features associated with language-specific phonemes are no longer universal. What is still more important is the fact, that even the intrinsic nature of a distinctive feature, despite its innate origin, may change under the influence of its paradigmatic context. For instance, the voicedness of a nasal sonorant is not identical to that of an obstruent; in languages like Russian, English, or French, nasal consonants are not phonologically voiced. However, a nasal is truly voiced from a phonological point of view, if it is opposed to its voiceless counterpart, as is the case of, let us say, Angami Naga.

3. SEMANTICS IN DISCOURSE

From the discussion of systemic aspects, we can now switch over to *discourse* with its own structures. As we already alluded to above, each specific language seen as a system of semantically interpretable oppositions (and, perhaps, of more intricate networks), may be construed as an encoded worldview of the ethnolinguistic community. It would not be appropriate to bring this point up for special discussion, therefore we'll just state, in a rather «dogmatic» manner (for details see Kassevitch, 1996), that there are many things which make the linguistic semantics (I don't mean its theory, of course) look very much like **mythical thought** with the lattter's specific regularities. Taken from this point of view, language (its semantics) is the **primary (original) myth** of the speach community; our own language is a very special «ready-made» instrument to ascribe to the world a specific structure and thus we can account for the reason why the world is the way it is.

Obviously, language is intended first of all to generate texts or, in other words, to make the discourse possible. The discourse, structured in accordance with the rules relevant to the given language, may and typically does exhibit features that mirror the culture of the people who speak it. The problem of what is known after Noam CHOMSKY as *pro-drop* could be addressed in this connection.

3.1 Zeros in the text: a cultural explanation.

It is understandable that many linguists tried to explain away this suppression of actants (of agentive personal pronouns in most cases) by appealing to the formal redundancy where the information about the person is encoded twice — both in the verbal inflexion and in the personal pronoun as it is the case with Russian, Spanish, or Italian, to give just a few examples. Yet, the putative explanation does not really hold water, for there exists a good number of langua-

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ges, among them Chinese, Thai, Burmese, etc., that have no trace of verb agreement, these languages belonging, nonetheless, to the *pro-drop* type.

It seems interesting, that the zero deixis, which is just another term for the pro-drop in the latter's basic variety, is usually correlated in a non-chance manner with *zero anaphora*. In some languages, even a switch-reference is no obstacle for using zero anaphora in which case the new topic has to be literally «read between the lines», heavily relying on the context and shared background knowledge.

In collaboration with my colleagues and students, we have undertaken a statistical study of written text samples in Russian (Ru), Old Church Slavonic (OCS), Spanish (Sp), Archaic Chinese (ACh), and English (Eng). The texts studied were translations of each other, although, unfortunately, we failed to have this principle systematically embrace all the texts which have produced, as a result, the following groupings of the languages: Russian-English-Spanish (English and Spanish versions being published translations of the Russian one), Old Church Slavonic-Russian, and Archaic Chinese-Russian. All the texts were approximately 10 pages long (standard printing format).

Our primary goal is to estimate the *indices of zero deicticity* (ZD) and of *zero anaphoricity* (ZA) computed as the number of dropped agentive actants per clause and the number of zero anaphoras per clause respectively. The detailed results of our study cannot be presented here for quite obvious reasons; the central point which deserves emphasis is that the languages demonstrate an **ordered continuum** with respect to both ZD and ZA. The two sequences, as can be seen from Fig. A, are more or less interconnected and, besides, the indices do not show any direct dependency upon a relevance vs. irrelevance of the verb agreement to the system under scrutiny.

Fig. A. Texts arranged according to ZD and ZA indices

(see: Kasevich and Nikitina, sous presse; Mukovsky, 1996; Svedentsova, in preparation)[2]

ZD: OCS, Sp (.23) > Ru (.05) > ACh (.04) > Eng (0)

ZA: Ach (.37) > Sp (.17) > OCS, Ru (.15) > Eng (.09)

Any in-depth analysis of the data presented in Fig. A would require much more space than we are allowed in this paper. But what could be generally responsible for the observed differences in the indices?

We would like to suggest that the central factors that underlie the data belong to the domain of culture, namely to the degree of the ***Self*-prominence** typical of the specific culture. There are cultures that tend to highlight the *Ego* or the Self (which is commonly known as personalism) to a greater degree, whereas other cultures favor a lesser self-prominence; one could speak,

[2]It should be kept in mind that the figures for Ru are pooled for the three texts analyzed and shown as arithmetic means. If the parallel texts are compared pairwise, the difference between, say, ACh and Ru is much more pronounced, the ZD for ACh being twice as much (.04 vs. .02 for Ru).

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respectively, of the *Ego*-cultures opposed to *Nos*-cultures. The Chinese culture with its strong Confucian flavor is thus described by a modern author: «The notion of man as an autonomous moral agent, which is the corner stone of Western ethical theorizing, is absent in Confucius' ethical considerations. Man as a free-willing biological entity is unimportant; such a notion plays no role in the mechanism of social interactions. His *raison d'être* in society is defined by the *li*-controlled relationships that he is in (where the *li* is the law that secures the proper functioning of both nature and society, cf. *rtà* of the early Indian doctrines. - *V.K.*) [...] Man as an individual abstracted away from his social and political relationships he is born into never enters the picture of Confucius' ethical world» (Bao Zhiming, 1990: 207).

We leave aside purely grammatical factors that contribute to the overall picture (cf. Kasevich, Nikitina, sous presse; Kassevitch 1996). One thing should be emphasized once more: we are entitled to make relative rather than absolute claims. Man, as such, acquires his identity as soon as he finds himself in an opposition to the world; in Martin Heidegger's words, man is «thrown into» this world, as distinct from the animal which is «let into the world» and, presumably, has no distinct feeling of being opposed to the latter (which would require a developed self-consciousness).

Still, different communities differ in the intensity of their «non-conformist» tendencies. Very important in this connection are confessional factors (where Christianity, especially Protestantism, strongly supports personalistictic trends), but we cannot go into that very specific subject.

We similarly are inclined to see cultural differences behind the picture concerned with the anaphoricity indices. The omission of a special sign that would explicitly refer to its antecedent is typical of the communities with a high level of shared knowledge and, in addition, where the speech act typically serves to refer to the immediately observed situations. Such is the case where one deals with a specific-situation oriented **dialogue** between two (or more) culturally very close interlocutors. As a result, the discourse naturally follows the rules of the dialogue — which is, in a way, the «second-degree» elliptical discourse, the first one being the inner speech.

The tendency to produce as many elliptical utterances as possible while following the rules of the grammar, which tolerates zero anaphora, is so strong in certain cultures that even the text, formally monological, is structured along the lines suggested by dialogue. This is why we dub the languages with high values of ZA indices *dialogue-oriented* languages (which seems preferable than the term «discourse-oriented» languages in Huang Yang, 1994, simply because **every** language is «oriented» to make discourse possible).

3.2 Cultural aspects of speech perception

Quite naturally, alongside the problems of text generation, there exist those concerned with text comprehension. In the latter case, the analyst could also see the facets of the problems pertaining to the culture-conditioned stereotypes. To begin with the simplest, even the average rate of speech is not the same in different cultures. A striking example can be found in the preliminary data of our informal experiments on perception of speech by the French and by the native speakers of Swiss French. The same text read out aloud by a female French speaker was

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followed perfectly well by our French Ss. while the Swiss Ss. found it fairly difficult because of the exceedingly fast tempo.

More intricate and subtle are the differences in text comprehension demonstrated by our Russian and French (Swiss) Ss. in the so-called cloze tests. The cloze tests were first introduced to assess the global linguistic skills of L2 learners (Taylor, 1953). Technically, the tests consist in deleting every *n*-th word in a text which is presented to Ss. who are asked to fill in the blanks. In our experiments, texts were presented both visually and orally modified in a variety of ways, but in this paper we are going to discuss just some results of the written text presentation.

Our Ss. (10 Russian students and about the same number of Swiss students) were presented with printed texts about 1 page long each; both were very accurate translations from Vietnamese into Russian and French (our Vietnamese data are still incomplete to be discussed here). Every 4th word was deleted from the texts. In one of the trials, the positions of the deleted words were not indicated in the test texts in which case the Ss. were simply asked to add whatever they like (but using the minimal number of words) to make the text coherent.

Our predecessors in running this type of experiment report that «...carefully translating a passage from one language into another yields cloze tests of approximately equal difficulty in both languages» (Oller, *et al.* 1971: 1). Our data, however, do not fully support these — apparently natural —findings. The answers elicited from the Russian and Swiss Ss. differed to a substantial degree.[3] This was especially the case where the texts lacking any indication of the deleted words' positions in the text were presented to the Ss. In this trial, the Swiss Ss. were successful in 12.7% of the time whereas their Russian counterparts — in 46.8%. In so responding, the Russian Ss. completely failed to spot the «hidden blanks» in 25% of the time, the same figure for the Swiss Ss. being 46.1%.

How could one account for the data observed? In our view, both grammatical and cultural considerations have to be taken into account.

As is well known, the French word order is much more rigid that the Russian one. Moreover, the French discourse is famous for its tendency to be highly ordered, formally transparent and clear-cut in its structure. From this, one could deduce that the semantic disorganization brought about by word deletion where no formal clues are given for overcoming this «structural chaos» is a much more serious «noise» for the French to cope with than it is for the Russian Ss.

Indirect evidence for the above consideration can be seen from the data pertaining to the relative difficulty of recovering the deleted verb heads. In the trials where the blanks were explicitly indicated, the Swiss Ss. correctly identified 46% of the verb heads, whereas the Russians — 34%. In the trials with the «hidden blanks», the difference in performance of the both teams was insignificant (25% and 28%). In other words, the indication of the position of the verb head (that is, of the structural center of a clause typically predicting both the number and the class of the actants) proved to be much more helpful for the French speakers who are

[3]A possible explanation may lie in the fact, that the number of deleted words were large enough: unlike our predecessors, we deleted not every 6th or 8th word of the text but, as mentioned above, every 4th word. Such an increase of the degree of the text distortion might be crucial. We could refer to our earlier experiments where narrow-band high-pass filtering resulted in drastically different speech recognition scores for Russian, Tadjik, Japanese, and French Ss. tested in absolutely identical — both linguistically and psychoacoustically — experimental settings (Kassevitch, *et al.*, 1990).

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«programmed» to operate with more rigid structures. Here one can see an interplay of linguistic-typological and cultural factors.

It can be argued without any doubt that speech perception involves both heuristic (preferably) and algorithmic strategies, both top-down and bottom-up procedures (cf. Kassevitch and Ventsov, 1994). Yet, it seems plausible to hypothesize that there may be **culture-provoked preferences** for the use of specific strategies and procedures. In our view, the data presented in the last section of this paper points to a certain preference to algorithmic rather than heuristic, to bottom-up rather than to top-down strategies typical of the French speakers as compared with the «Russian style» speech perception.

It goes without saying that what is meant here is concerned with very subtle differences, brought to life by the linguistic-typological *and* cultural specificity. As it has been already emphasized with respect to the differences in deixis and anaphora regularities, we don't want to be misunderstood as claiming a total incompatibility of the two supposed types. Here, again, we should rather speak of a certain continuum.

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