

## OUTLINES OF A COGNITIVE APPROACH TO WORD-FORMATION

Andreas Blank

*University of Marburg, Germany*

This paper sketches a theoretical framework for a semantic typology of word-formation. When speakers express a new concept by word-formation they first have to analyze it into salient „subconcepts“. The most salient subconcept that is already linked to a word serves as a semantic basis for the word-formation. The semantic difference between the basis-concept and the concept to be expressed then is bridged either by using an affix or by adding the word related to a second subconcept (“co-basis”). The relations between the basis, the co-basis and the new concept rely on the associative principles *contiguity*, *contrast* and *similarity*.

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### 1. INTRODUCTION

Word-formation means to verbalize a concept by using two or more words, or one word and an affix, or by taking one word and changing its grammatical category. Concepts are embedded into “frames” (also called “scenarios” or “domains”; cf. Fillmore, 1985; Langacker, 1987), which are static or dynamic mental representations of typical situations in life and their typical elements. Concepts within domains and domains themselves are related by *conceptual contiguity* (cf. Blank, forthcoming). On the referential level, concepts correspond to cognitive categories, which are often organized prototypically. The relation between the members of a category is characterized by degrees of *similarity*. Similarity also serves as an associative basis for metaphor: here the gap between two concepts is bridged by highlighting a more or less peripheral feature of both concepts. While contiguity is based on our everyday experience, i.e. a kind of *mental induction*, similarity is a *mental abstraction* linking referents and concepts that might never occur together or be in any real relation at all. Similarity is a matter of degree ranging from maximum resemblance, i.e. *identity*, to maximum dissemblance, i.e. *contrast* (Blank, 1997).

## 2. SUFFIXATION

### 2.1 Suffixation based on similarity/contrast

Referents are mentally represented with prototypical, “normal” dimensions and qualities. Deviations from the prototypical conception of a category or the speaker’s emotional attitude towards the denoted referent can be expressed by “variational suffixation” (cf. Gauger, 1971). In this case, speakers feel a noticeable contrast between the concept to be verbalized and the prototypical conception, by attaching it nevertheless to the prototype of the category it belongs to. Theoretically, four dimensions of deviation can be expressed: SMALLER, BIGGER, WORSE and BETTER/ENDEARING. Generally, the Romance languages except French have developed a full program of variation, and among them, Italian seems to make the most use of it, as the example of It *ragazzo* ‘boy’ demonstrates (cf. also Dressler/Merlini Barbaresi 1994):

- (1a) SMALLER: It *ragazzino*, *ragazzetto*, *ragazzettino*
- (1b) BIGGER: It *ragazzone*
- (1c) BETTER/ENDEARING: It *ragazzuccio*
- (1d) WORSE: It *ragazzaccio*, *ragazzettaccio*

### 2.2 Suffixation based on contiguity

This type serves above all to refer to new concepts by using a concept that is part of the same frame, and can therefore be compared to metonymy (Koch, forthcoming; Blank, 1997; forthcoming). Word-formation based on contiguity is deeply anchored in our mind, because it relies entirely on concepts related within frames. Some examples taken from Spanish are:

- (2a) ACTIVITY – PLACE: Sp *lavar* ‘to wash’ → *lavandería* ‘wash-house’
- (2b) ACTIVITY – PERSON: Sp *pescar* ‘to fish’ → *pescador* ‘fisherman’
- (2c) OBJECT – PERSON: Sp *hierro* ‘iron’ → *herrero* ‘blacksmith’

## 3. PREFIXATION

### 3.1 Prefixation based on contiguity

Prefixation can be found with all three types of association. The conceptual gap between target and source concept is bridged by the meaning of the prefix. Prefixations based on *conceptual contiguity*, like in suffixation, express a “real” relation between the two concepts:

- (3a) F *guerre* ‘war’ → *après-guerre* ‘postwar (time)’
- (3b) It *scrivere* ‘to write’ → *sottoscrivere* ‘to sign’ (lit. “to write under”)
- (3c) Sp *atlántico* ‘atlantic’ → *transatlántico* ‘transatlantic’

### 3.2 Prefixation based on similarity

Similarity-based prefixations, again like in suffixation, express a significant deviation from a prototype in quality or quantity:

- (4a) F *carburant* 'petrol, gasoline' → *supercarburant* '4 star/premium petrol'
- (4b) It *vecchio* 'old' → *stravecchio* 'very old'
- (4c) Sp *falda* 'skirt' → *minifalda* 'miniskirt'

The fundamental difference between similarity and contiguity based prefixations becomes more evident, when we emphasize the fact that F *supercarburant* is a kind of petrol (i.e. sth. similar), while F *après-guerre* is not a kind of war, but the period that follows a war (i.e. temporal contiguity). Things different, at first sight, for It *sottoscrivere*, which indeed is a kind of writing, but the reference-point focussed by the prefix *sotto-* in fact is another text, to which sth. is "written under". The underlying conceptual association thus is spatial contiguity.

### 3.3 Prefixation based on contrast

The cognitive domain belonging exclusively to prefixation is the expression of opposition, negation and other types of *contrast*:

- (5a) F *content* 'satisfied' → *mécontent* 'unsatisfied'
- (5b) It *cucire* 'to sew' → *scucire* 'to undo'
- (5c) Sp *gusto* 'pleasure' → *disgusto* 'displeasure'

## 4. WORD-FORMATION BASED ON IDENTITY

An important motivation for WORD-FORMATION is the need to have a word in another word class. In this case, the concept remains the same and there is no conceptual association at all. The change is on the level of the lexical information. In order to change word class, speakers can use derivation or, as an isolating device, conversion (comprising so-called "back-formation" and "zero-derivation"):

- (6a) F *père* 'father' → *paternel* 'paternal'
- (6b) It *lavare* 'to wash' → *lavaggio* 'act of washing'
- (6c) Sp *vivo* 'alive' → *vivacidad* 'liveliness'
- (7a) It *noleggiare* 'to hire' → *noleggio* '(the) hire'
- (7b) Sp *atacar* 'to attack' → *ataque* '(the) attack'
- (7c) F *chagrin* (adj.) 'troubled' → (le) *chagrin* 'trouble'
- (7d) It *bene* (adv.) 'well' → (il) *bene* 'good (thing)'

## 5. COMPOUNDING

For verbalizing a new concept by compounding two conceptual associations are requested, because two (or sometimes even more) concepts are involved. The criteria of existence/non-existence of determination within the compound and the different associative combinations enable us to distinguish five semantic types of compounding in Romance languages:

### 5.1 Similarity/contrast within a category + conceptual contiguity

This is the most frequent and typical semantic type of compounding, which is also found in most syntagmatic formations of noun + preposition + noun/verb:

- (8a) F *wagon-lit* 'sleeping car' (lit. "bed-car")
- (8b) It *autostrada* 'motorway/highway'
- (8c) Sp *lengua extranjera* 'foreign language'
- (8d) Pt *máquina de escrever* 'typewriter'

Traditionally speaking, we could say that one part determines the other, but I will plead here for a different interpretation: a double conceptual relation between the new concept expressed by the compound and the two concepts that form the compound. In ex. (8a) the semantic relation between the concepts SLEEPING CAR (F *wagon-lit*) and RAILROAD-CAR (F *wagon*) can be described as hyponymy. Both concepts could be classified into the same category but the SLEEPING CAR shows a significant deviation from the prototype of a railroad-car. The specific difference is expressed by recourse to the frame. The most salient subconcept of a SLEEPING CAR was, to French speakers, the existence of a BED. Thus, this type of compounding is characterized by the similarity between a prototype and a peripheral member as well as by conceptual contiguity.

### 5.2 Similarity/contrast within a category + metaphoric similarity

This type shows the same kind of relation for the determinatum as in 5.1, while the determinans is expressed metaphorically, i.e. by a concept belonging to a completely different domain, that shows particular resemblance with the concept to be verbalized:

- (9a) It *pescecane* 'shark' (lit. "dog-fish")
- (9b) E *frogman* 'swimmer equipped with air tanks'

### 5.3 Double similarity/contrast (coordinated compounds)

This type is characterized by the absence of determination. The concept to be expressed shows particular deviation from the prototype of two (or even more) categories, but doesn't really fit into any of them. Thus, we have a case of double similarity/contrast:

- (10a) It *portafinestra* 'French window'
- (10b) F *moissonneuse-batteuse-lieuse* 'combine harvester'
- (10c) Pt *surdo-mudo* 'deaf-mute'

### 5.4 Integral metonymies and metaphors (exocentric compounds)

In this case, none of the parts can refer directly to the designated concept nor to a superordinate category. Furthermore, typical cases of exocentric compounds don't involve determination. They must be interpreted as integral metonymies (11) or metaphors (12):

- (11a) It *pellerossa* '(American) Indian, redskin'
- (11b) F *pied noir* 'French from Algeria'
- (12a) It *bocca di leone* 'snapdragon'
- (12b) E *skyscraper* 'highrise building'



### 5.5 Double contiguity

This semantic type is esp. found in compounds of *verbal element* + *noun*, a very characteristic type of compounding in Romance languages:

- (13a) F *chasse-neige* 'snowplough' (lit. "snow-chase")
- (13b) It *cavatappi* 'corkscrew'
- (13c) Sp *limpiabotas* 'shoeblack/shoeshine boy' (lit. "shoe-clean")

Semantically these Word-formations rely entirely on frame-relations: there is contiguity between the concept SNOWPLOUGH and the SNOW on one side, and between the ACTIVITY of a snow-plough and the concept TO CHASE on the other, showing a salient aspect of this activity.

## 6. CONCLUSION

Word-formation is formally and semantically a very economical and creative device for expanding the lexicon. It is cognitively grounded in our principles of categorizing and organizing the world. Their formal transparency makes word-formations quite easy to understand. Investigating the typical semantic processes of word-formation and their cognitive basis will give us more insight into the way we conceive the world around us and into the linguistic tools offered by our languages to translate our conceptions into language.

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