Does Metonymy Bridge Conceptual Distance?

ANSELM TERHALLE, PETER INDEFREY
(Heinrich-Heine-University Düsseldorf)

Can metonymy jump from 'tissue' to 'staff'? Yes, it can, at least step-by-step, as the semantic development of French *bureau* shows (Blank, 1997). And how about direct metonymic shifts across large conceptual distances? This is what we examine in this paper.

In a metonymic construction, a word which normally stands for a concept A is used to designate a concept B, with A being an aspect of B and/or B being an aspect of A. The distance between two concepts is the inverse of the degree to which these concepts are related: closely related concepts have a small distance to each other, less related concepts are more distant. Thus, concepts and their properties (such as 'object' and 'shape') have a small distance as they are directly related. Concepts which are only related by means of other concepts (such as 'agent' and 'patient' in an event frame which are related indirectly to each other via the event) have a bigger distance.

Psycholinguistic research on metonymy has shown that innovative metonymies, i.e. metonymies which are neither lexicalized (like *construction* in the *construction of the sentence is complex*) nor common (like *Dickens* in *read Dickens*), are processed as fast as common metonymies and lexicalized expressions if enough context is provided (Frisson & Pickering, 1999, 2007). We investigate an aspect of metonymy which has not been treated up to now: the degree of conceptual association between the literal meaning of an expression and the intended metonymic reading.

This is our working hypothesis:

Working hypothesis   *The processing time of an innovative metonymy depends on the distance between the involved concepts: the bigger the conceptual distance, the longer the processing takes.*

It is implemented as follows:

Processing time is tested in a self-paced-reading experiment (Just et al., 1982). Metonymies are embedded in a small context and presented to the test person word-by-word. The test person decides when the next word appears by pressing a button. Reaction times will be recorded after the appearance of the metonymic target word and the two words that follow.

In order to guarantee that the metonymies are innovative, we resort to German deverbal *ung*-nominalizations that do not appear in the Celex database (Baayen et al., 1995) and get less than 1000 hits on Google.
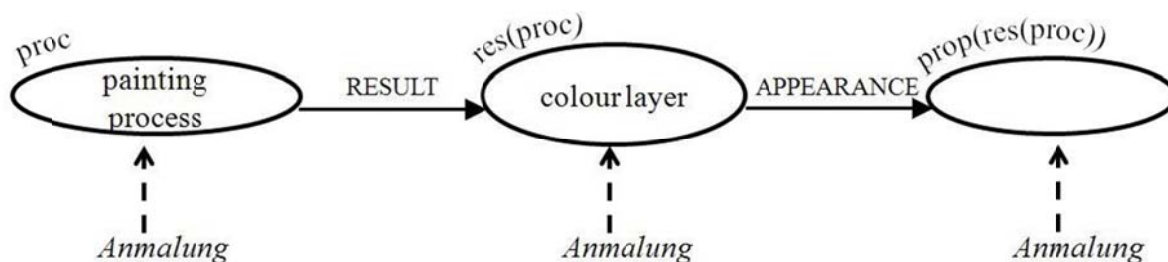

Figure 1: Frame which illustrates the concepts which are represented by the *ung*-nominalization and the relations between these concepts

We implement the criterion of conceptual distance with the help of three types of concepts: 1) process (proc), 2) result of the process (res(proc)) and 3) property of the result of the process (prop(res(proc))). Res(proc) is directly related to proc and prop(res(proc)) is directly related to res(proc), but prop(res(proc)) is only indirectly related to proc. Thus, the conceptual distance between proc and res(proc) is smaller than between proc and prop(res(proc)) (cf. Figure 1).

For each *ung*-noun, three contexts trigger the three different readings. The proc-reading is the basic meaning of the nominalization (which will be verified in a supplementary experiment). Thus, the test persons are moved to make a direct metonymic shift from the proc-reading to the res(proc)-reading and an indirect, mediated metonymic shift from the proc-reading to the prop(res(proc))-reading.

Example: the deverbal noun *Anmalung* (< *etw. anmalen* 'to paint sth.') is used in the sense of 'painting process', 'result of the painting process: coat of paint' and 'property of the coat of paint: appearance'.

proc   Julius war die weiße Wand satt gewesen. Er hatte grüne Farbe aufgetragen, die Farbschicht war fast trocken. Die Dauer der Anmalung hatte er unterschätzt.

Julius had had enough of the white wall. He had applied green paint, the coat had almost dried. He had underestimated the duration of the [ung-noun: 'painting process'].

res(proc)   Julius war die leere, weiße Wand endgültig satt gewesen. Daher hatte er nun grüne Farbe aufgetragen. Das langwierige Trocknen der Anmalung hatte er kaum abwarten können.

Julius had finally had enough of the blank, white wall. That's why he had applied green paint. He had hardly been able to wait for the [ung-noun: 'coat of paint'] to dry.

prop(res(proc)) Julius war die weiße Wand satt gewesen. Er hatte grüne Farbe aufgetragen, die Farbschicht war fast trocken. Ihre matte, glatte Anmalung hatte er sich genau so vorgestellt.

Julius had had enough of the white wall. He had applied green paint, the coat had almost dried. He had imagined its matt, smooth [ung-noun: 'appearance of the coat of paint'] exactly like it was.

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