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## A Note on the Relation between Cognitive Linguistics and Wordplay

This contribution to the discussion forum (DF) touches upon the relation between proposals in cognitive semantics and the phenomenon of wordplay. A usage-based cognitive linguistic view of language can highlight certain aspects of wordplay that are mentioned in Esme Winter-Froemel's statements in DF (henceforth Winter-Froemel, DF), and it can help to expound further on some of the ideas expressed in her position paper. The following discussion will relate to some of the relevant passages from the position paper in order to highlight aspects of a cognitive linguistic view of wordplay.

To begin with, it needs to be stated that the reflections below see the main function of wordplay as producing a humorous effect (see Winter-Froemel, DF, 2.2.1). Since wordplay is part of humorous language use, from a cognitive semantic point of view, the question arises which processes can guide the conceptualization and the mapping of meaning onto linguistic form in order to create a humorous effect.

As described in Brône, Feyaerts and Veale (2006: 207), Victor Raskin's Script Theory of Humor (1985) and its offspring, the General Theory of Verbal Humor (Attardo and Raskin 1991), postulate the existence of opposing scripts or frames whose resolution in online processing forms the base of verbal humor. Even though not directly motivated from a cognitive linguistic view of language, Attardo and Raskin's use of the concepts of script and frame relates very closely to the central cognitive linguistic notion of *semantic frame* as originally postulated by Charles Fillmore (1977, 1982). The concept of the semantic frame has turned into a central idea in cognitive linguistics being applied to the description of syntactic relations (Fillmore 1985, 1988), lexical meaning (Barsalou 1992; Lehrer 1992), and it influenced the development of related notions such as domains or idealized cognitive models (Lakoff 1987) used in conceptual metaphor and metonymy research, as well as mental spaces put forward in Fauconnier (1985) and later adapted in Fauconnier and Turner's theory of conceptual blending (2002).

The essential idea of the metaphor of the semantic frame and its related notions is that they represent knowledge structures that encapsulate the encyclopaedic, interconnected, and contextual nature of meaning. This is very much in line with the concept of a script which stands for the meaning construction of a scene that relies on encyclopaedic knowledge and contextual expectations.

Verbal humor can rely on the process that a certain script (or frame) is built up in context creating an expectation for its semantic completion (or resolution); however, before being completed in the expected way, the script is interrupted by verbal material that evokes a different, unexpected, and potentially opposing script. An example taken from Coulson et al. (2006: 234) can illustrate this effect.

- (1) I let my accountant do my taxes because it saves time: last spring it saved me ten years.

Coulson et al. (2006) have adapted the basic notion of opposing scripts put forward in Raskin (1985) and Attardo and Raskin (1991) and postulate that the cognitive process of frame-shifting can generally explain verbal humor as exemplified in (1). In their article, frame-shifting is defined as “the semantic and pragmatic reanalysis in which elements of the existing message-level representation are mapped into a new frame retrieved from long-term memory” (2006: 229). In a psycholinguistic, eye-tracking experiment, Coulson et al. find empirical proof for their claim in that the reading of humorous scenes based on frame-shifting leads to a backtracking eye motion, which means that the understanding of the jokes involves extra processing effort compared to non-humorous, expected scenarios.

While this type of research has established a strong link between a model of knowledge representation in cognitive semantics and the emergence of verbal humor, the question remains whether cognitive linguistics can also help to explain some of the mental processes involved in the creation and understanding of wordplay. In a narrow sense, wordplay in Winter-Froemel (DF, 5.2.8, Fig. 1) mostly relates to instances of puns, in which two or more senses of a linguistic item are played upon with or without accompanying formal changes. A few examples that fit into that category are reproduced here from Winter-Froemel, DF (note that the original numbering of the examples is retained to facilitate their identification in Winter-Froemel, DF):

- (12) I’d tell you a chemistry joke but I know I wouldn’t get a reaction.
- (13) I wasn’t originally going to get a brain transplant, but then I changed my mind.
- (38) “Can you answer useful questions?” she [the Red Queen] said. “How is bread made?”

“I know that!” Alice cried eagerly. “You take some flour—”  
 “Where do you pick the flower?” the White Queen asked.  
 “Well, it isn’t picked at all”, Alice explained: “it’s ground—”  
 “How many acres of ground?” said the White Queen.  
 (Lewis Carroll, *Through the Looking-Glass*, 9.227)

- (39) *Ness-Café* (name of a café located at Loch Ness; example taken from Heibert 1993: 132)

All of the selected examples above represent puns whose humorous effect is based on polysemy (*reaction; changed my mind*), homophony (*flour – flower*), homonymy (*ground – ground*, neglecting the difference in word class), and paronymy (*Ness – Nes-*). The polysemy in the idiomatic phrase *changed my mind* emerges from its idiomatic, metonymic meaning (MIND FOR THOUGHT) and from its contextually primed, non-idiomatic, metonymic interpretation (MIND FOR BRAIN).

From a cognitive semantics point of view, the notions of polysemy, homonymy, homophony, homography, and by extension paronymy appear as closely related phenomena. All of these processes draw on a link between same or similar forms that can represent different meanings (of a more or less related nature), leading to lexical ambiguity. In wordplay, or more specifically in puns, this ambiguity can be evoked for humorous effects. While homophony, homography, and paronymy show close formal overlap, polysemy and homonymy are characterized by complete formal equivalence. As Croft and Cruse (2004: 111) point out, a distinction between homonymy and polysemy can only be made on diachronic grounds, ascertaining distinct lexical origins for two formally equivalent lexical units. From a synchronic point of view, intuitions about semantic relationships of polysemous / homonymous units are a matter of degree (*ibid.*). Thus, in terms of meaning relations, homonymy and polysemy can be seen on a continuum of associative distance (to employ a spatial metaphor). What is important for both polysemy and homonymy is the definition of “separate” sense units giving rise to polysemous / homonymous meanings. Croft and Cruse call upon the notion of ‘attentional autonomy’ of meanings and their ‘antagonistic’ relations (2004: 112); this can be related to Tyler and Evans’ claim that separate senses need to show some independence of contextual use in order to be considered as stored in long-term memory (cf. Evans and Green 2006: 343).

Support for a differentiation between homonymy and polysemy can be found in psycholinguistic research. Beretta et al. (2005), for example, provide neurophysiological evidence of MEG measurements that call for an interpreta-

tion of polysemous senses as related to a single lexical entry whereas homonymous senses can be regarded as having separate entries in the (metaphorical) mental lexicon. In a more recent EEG study of homonymy and polysemy, Klepousniotou et al. (2012) arrive at a similar conclusion in that different N400 effects for the processing of polysemous and homonymous words (with increased activity in the latter) provide further evidence of differential processing. Their interpretation of the results chimes in with Croft and Cruse's observation on the continual relation between polysemy and homonymy given above:

Polysemous words (and in particular metonymy) seem to occupy one end of the continuum, in terms of their representation, with their multiple interrelated senses stored together; homonymous words occupy the other end of the continuum with their unrelated meanings being stored separately (and competing for activation).

(Klepousniotou et al. 2012: 19)

Turning back to the discussion of wordplay, a cognitive and psycholinguistic approach to the phenomenon can be grounded in an understanding of language as a neuronal network. From such a perspective, one can assume the following scenario of how puns (i.e. wordplay in the narrow sense) are processed:

- a) a same or similar form has the potential to activate different concepts in the neuronal network
- b) initial context primes a particular activation (i.e. conceptualization) of a lexical form
- c) textual (or metatextual) cues are given that prime a different activation (i.e. conceptualization) of the same / similar lexical form
- d) one sense can also be activated by default in the neuronal network (i.e. the most frequently activated neuronal pathway of conceptualization)
- e) the interplay of these contextual (and default) processes activate two (or more) conceptualizations of a same / similar form in the neuronal network
- f) the parallel activation of the different meanings lead to concurrent, different interpretations of the utterance
- g) humor emerges from the concurrent, contextually adequate, different interpretations of the utterance

Note that the sequencing of these steps is done to provide more detail in the description of such a process of parallel neuronal activation triggered by a same / similar form but should not be seen as a rigid processing sequence. The co-presence of different contextual cues can actually activate meanings in a nearly simultaneous fashion. It is also important to mention that the interplay of context and the priming of a certain activation is dependent on various factors. In

(12), for example, the context activates the specific meaning of ‘reaction<sub>2</sub>’ in the domain of chemistry. The much more frequent (i.e. common) activation of the lexical item in language use would lead to a conceptualization of ‘reaction<sub>1</sub>’, that is, its non-technical sense. Thus, in this example, the activation potential in the neuronal network of ‘reaction<sub>1</sub>’ is much higher than that of ‘reaction<sub>2</sub>’ due to general language use (i.e. frequency of activation of a certain neuronal pathway). This could also be described by the notion of default interpretation in a usage-based, cognitive view of language. The different activation potential of ‘reaction<sub>1</sub>’ and ‘reaction<sub>2</sub>’ explains why ‘reaction<sub>2</sub>’ (the chemistry sense) needs to be primed in (12) as a non-default contextual meaning whereas ‘reaction<sub>1</sub>’ is intrinsically activated due to its generally high activation potential emerging from common language use. A similar constellation of activation also holds for the pun in (13).

Example (38) is differently construed on the textual level. In that case, the reader can appreciate the humorous mix-up of meanings by being contextually guided from one interpretation (context-based activation of a specific sense) to an alternative interpretation of a homophonous and a homonymous form. In cognitive terms, the underlying processes of a same / similar form activating different conceptualizations as depicted in a) to g) remain as the neuronal backdrop also in these instances – the only difference being in the clear sequential triggering of the meanings. This aspect of a sequential triggering might also explain a differentiation into wordplay *in absentia* vs. wordplay *in praesentia* referred to in Winter-Froemel, DF, 3.5. In terms of neuronal activation, the textual presence of the same / similar form by way of repetition leads to the activation of different senses that remain co-activated due to their close sequencing. However, since the basic cognitive process of co-activation due to similar / same form is the same, it remains an empirical question related to details in neuronal processing whether the distinction of wordplay *in absentia* vs. *in praesentia* can actually be described as “involving fundamentally different forms of cognitive processing / recognizing / decoding wordplay” (Winter-Froemel, DF, 3.5). Without further evidence, it seems safe to consider that distinction as textual-rhetorical forms of wordplay rather than as fundamentally diverse cognitive types of wordplay.

In (39), *Ness-Café*, parallel activation of senses emerges from the formal similarity of *Ness* and *Nes-*. The separate meanings are primed by an interplay of the immediate written context reminiscent of the brand name and the spelling variation that relates to the name of the geographical location where the shop sign is found.

The reflections on the possible neuronal activation patterns in puns do not yet offer an answer to how, in cognitive terms, the humorous results may come about. This takes us back to the notion of frame-shifting employed by Coulson and defined at the beginning. However, also the notion of frame-shifting merely indicates the existence of alternate meanings / interpretations that are cognitively available to a recipient and a producer of wordplay who can shift between these meanings. The question remains of when the parallel activation of senses based on formal similarities induces a humorous effect in the language user. At present, it seems that cognitive linguistic terminology might not be adequate to describe this process. In general, there are different expressions that describe how humor emerges; however, it is difficult to closely relate such labels to cognitive processes as such. For example, the notion of ‘incongruity’ and its resolution implies that humor emerges as a result of resolving incongruent meanings. Another metaphoric way of referring to incongruity would be to speak of ‘conceptual clashes’. The implications of terms such as ‘incongruity’ or ‘clashes’ can, however, be misleading for the analysis of wordplay as examples (12), (13), and (39) show, which do not involve incongruous or clashing senses but rather contextually and / or intrinsically available alternative meanings. Instead, a more unifying cognitive reaction that emerges from the processing of formally-triggered, concurrently activated senses might relate to a feeling of surprise or unexpected reference in a given context. It is also likely to assume that the reaction to the unexpected can result in humor if the recipient evaluates the parallel activation of two or more senses in wordplay as something positive (e.g. witty, playful, outside the norm, imaginative, stimulating, funny, aesthetically pleasing and so on...). In cognitive terms, we could thus say that humor in wordplay (in a narrow sense) arises from a contextually-bound process of (positively) evaluating the parallel activation of senses from same / similar linguistic forms. This is irrespective of whether similarities in form occur within a code or across different codes as many contributions in this volume show.

To complete this sketch of wordplay (in the narrow sense, i.e. puns) from a cognitive linguistic point of view, a final comment is necessary on whether cognitive semantic theories can facilitate the analysis of the phenomenon. Theories of Conceptual Metaphor and Conceptual Metonymy can be applied to describe meaning relations between activated senses (as briefly illustrated for the phrase *changed my mind* above). In this way, they can also help to distinguish meaning relations on a cline from polysemy to homonymy. An understanding of semantic frames (in the sense of lexical semantic frames or domains) is instrumental to a cognitive view of wordplay. As argued for above and in line with Coulson et al., the mental capability to shift between parallel, activated senses that can belong

to different semantic frames provides a basic cognitive explanation of how humor (ultimately emerging from an evaluation of the concurrently activated senses) is grounded in wordplay as punning.<sup>1</sup> Even though semantic frames also play a role as input spaces in conceptual blending theory, its traditional structural architecture of input spaces, generic space, and blended space might not be a particularly adequate model for the analysis of all types of wordplay (for a felicitous application, see Knospe, Part II, this volume). According to its structural layout, conceptual blending presumes a selective merger of meanings from the input spaces into the blended space, which gives rise to new insight or new meanings that can be lexically expressed (cf. Fauconnier and Turner 2002). Thus, conceptual blending uses a metaphor of superposition of individual frames that merge into something new by selectively taking certain meaning elements from the input frames. In the examples of wordplay in the narrow sense given above, however, it is not the case that the parallel, activated senses (triggered by the same / similar form) merge to give rise to a new conceptually-blended whole. Instead, humor emerges from the concurrent activation of separate senses that can relate to different frames and the cognitive capacity of shifting between these senses (i.e. sense-shifting and / or frame-shifting). This means that both senses are activated individually and decoded with the rest of the utterance to give way to both meanings simultaneously.

In sum, this contribution to the discussion forum has put forward a cognitive linguistic perspective on wordplay. Frame-shifting has emerged as central to the processing of humorous wordplay, in particular puns. In addition, a usage-based approach to language as a neuronal network has allowed some theorizing on parallel sense activation due to contextual factors and / or default interpretations in the processing of puns. Frame-shifting operates on top of parallel sense activation when each of the meanings of a same / similar form is matched with its contextual interpretation. It is hoped that future research in this area will apply cognitive semantic tools and engage further into a combined cognitive and psycholinguistic analysis of this type of verbal humor.

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<sup>1</sup> Other forms of wordplay such as soundplay or merely formal manipulations do not activate different conceptualizations (see Winter-Froemel, DF, 5.2.8, Fig. 1; see also Verena Thaler, DF, 2.2). In such instances, humorous effects can emerge due to the positive evaluation of formal manipulations compared to standard forms or because of rhyming and similar effects (e.g. in induced soundplay such as tongue twisters, which can lead to lexical confusions in fast pronunciation).

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