

Cognitive Study of the Processing of Idioms

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Abstract—This chapter attempts to establish the role of two cognitive linguistic theories, metaphor theory and conceptual integration theory, in the processing of both conventional and modified phraseological units. It investigates the range of applications and interpretations of the existing cognitive models, furnishing them with attested phraseological material to test their efficiency and applicability as processing templates. It is argued that the two theories can be viewed as complementary: whereas the theory of metaphor is productive in accounting for the processing of a wide range of conventional phraseological units, the theory of conceptual integration can be applied to the analysis of modified phraseological units.

Keywords—*idioms; metaphor theory; conceptual integration theory*

I. INTRODUCTION

Research on figurative language processing has always been challenging, and at times even controversial. Some of the existing models of idiom interpretation are the standard pragmatic model, idiom list hypothesis, lexical representation hypothesis, direct access view or figurative thought model (Gibbs 1994), phrase-induced polysemy model of idiom comprehension (Glucksberg 1993: 11), graded salience hypothesis (Giora 1997), and the idiom decomposition approach (Gibbs 1995: 97–116).

Two of the more recent developments stemming from the psychological and cognitive traditions are the constraint satisfaction model (Katz & Feretti 2001) and the space structuring model (Coulson & Matlock 2001). In the constraint satisfaction model the best interpretation of a figurative expression is the one that offers the most coherent account of what a speaker or writer is saying, taking into account both linguistic and non-linguistic information. The space structuring model, on the other hand, is more in line with the cognitive conceptual integration theory or blending theory (Fauconnier & Turner 1998), involving more than just simple mappings between source and target domains.

II. THEORY OF METAPHOR AND METONYMY AND CONCEPTUAL INTEGRATION THEORY

The theory of conceptual metaphor and metonymy (Lakoff & Johnson 1980) is one of the central theories of cognitive linguistics, which managed to explain and account for the ubiquity of the two mechanisms in language use. Lakoff & Johnson propose that the production and processing of figurative expressions are mediated by

metaphorical and metonymic correspondences that are part of the human conceptual system, i.e. that figurative expressions are interpreted as instantiations of deep conceptual metaphors or metonymies.

A more recent development of cognitive linguistics is the conceptual integration theory, or blending theory (Fauconnier & Turner 1998, 2002). This is currently one of the most promising theoretical frameworks, which provides insights into how we think, create, and understand the world around us, aiming to account for both linguistic and non-linguistic blends. A conceptual integration network is an array of mental spaces, which usually includes two or more input spaces structured by information from different cognitive domains, a generic space and a blended space. The structure of the generic space is common to all input spaces, and the structure of the blended space inherits elements from all inputs, developing a novel, emergent structure. ("Fig. 1")

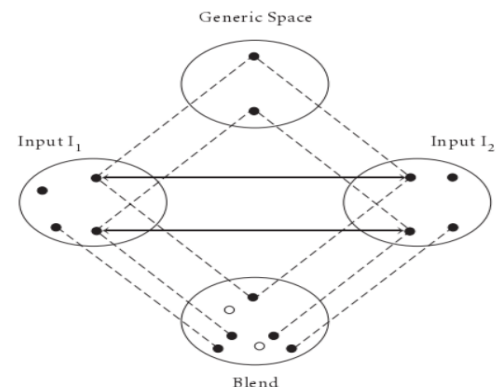


Fig. 1. The conceptual integration network.

The theory offers a model of meaning construction which operates in analogy, metaphor, metonymy, counterfactuals, and other phenomena (Coulson & Oakley 2005; Fauconnier & Turner 1998). Fauconnier & Turner (2002) designed blending theory as a set of principles for combining cognitive models in a network of mental spaces containing partial representations of entities and their relationships in a scenario, as they may be perceived, imagined, remembered, or understood by speakers. The theory can provide an explanation of how a participant in an exchange of information might encode this information on a referential level by dividing it into concepts relevant to different aspects of the scenario. The central component of the theory is the mechanism of cross-space mappings, which makes it possible to understand how an element in one mental space corresponds to an element in another mental space.

Constitutive principles at work within the conceptual integration network include matching and counterpart connections in cross-space mapping, selective projection from inputs, composition, completion and elaboration, finally integrated into an emergent structure.

III. PROCESSING OF IDIOMS

Most research focusing on the mechanisms of idiom processing investigates only one factor in the processing: context, individual word meanings, cognitive mechanisms, etc. I will here argue for interplay of factors that jointly lead to idiom interpretation. Additional relevant factors that are often neglected are individual differences between language users (age, sex, education, knowledge of the language(s)), processing of native vs. foreign language idioms, processing of familiar vs. unfamiliar expressions and real time vs. retrospective processing. It cannot be assumed that the processing of idioms will be the same for all users and for all kinds of expressions, in all the languages they use. For processing idioms in a foreign language, it is expected that the native language, or the command of other foreign languages, will play a role in the processing. The first time understanding of an idiom in a foreign language may involve a longer process and incorporate actions such as consulting monolingual and bilingual dictionaries and native speakers, which are not necessary the second time the idiom is encountered, depending, of course, on memory and other factors influencing idiom acquisition. In this chapter I will, however, only consider idiom processing by adult users in their native language.

Challenging the notion of pure idioms and their apparent semantic opacity (to burn the candle at both ends or to hear something straight from the horse's mouth are often used as examples of this type), I argue here that the meanings of their constituents, although insufficient for their final interpretation, do play a role in their processing. Evidently, the meanings to hear and straight from are retained in the interpretation of to hear something straight from the horse's mouth, whereas the horse's mouth should then have little or nothing to do with a real horse but rather refer to a reliable source. This is evidently not the case, as the horse's mouth, a piece of racing slang, alludes to the fact that a horse's age could only be discovered by inspecting its teeth. Most users do not make this link, but it is still true that, based on the meanings of hear straight from, some reliable assumptions can be made about the meaning of the whole phrase.

Sometimes the etymological links are rather crooked, as in to eat humble pie, another seemingly opaque idiom (Hendrickson 1998: 226). The word humble in this expression has nothing to do etymologically with the modern English word humble. Umbles or numbles were the innards of deer and were often used in pies made for servants. Therefore, anyone who ate umble pie was considered to be in an inferior position. As a result of the play upon words and phonetic similarity that led to substituting humble for umbles, we today speak of eating humble pie, meaning suffering humiliation, apologising, or abasing oneself. Knowledge of the world and language, in this case of history and etymology, can therefore be used as an analytical tool for

idiom interpretation. Of course, the origin of most opaque idioms is unknown even to native speakers and appears to be nonsensical, but they still evoke images and are based on the metaphorical or metonymic concepts that we subconsciously use to interpret them. The etymology of opaque idioms, however, is not always helpful or accessible in real time processing for most users, but may be used only in retrospect. Research suggests that etymology as a tool for idiom interpretation is more likely to be used by non-native speakers as it can prove useful in helping learners learn and remember idioms in a foreign language (Boers 2001; Boers et al. 2004).

Contextual clues are also relevant and helpful in the process of interpretation. If the idiom to burn the candle at both ends is encountered in a context such as If you keep burning the candle at both ends you will end up all stressed out and exhausted, the context provides extra references to the meaning of the idiom. Clues can even be found beyond the limits of the particular sentence in broader discourse.

From the traditional perspective, an idiom such as to burn a candle at both ends should not have anything to do whatsoever with the actual burning of candles. And yet, there appears to be certain logic behind the image of literally trying to burn candles at both ends (of the day) and the current meaning of this idiom. The links here are not clearly etymological, but it is evident that there is so much more at stake here: word meanings are loaded with powerful symbols, relationships, and images that we evoke when we attempt to interpret an idiom in which a word occurs. The interpretation thus also relies on our general knowledge of the world embodied in images. The verb to burn itself here rests on a powerful metaphor that can be found in a number of expressions that denote zealous activity and selfless dedication to work, even across languages.

In contrast to the traditional view of idiom opacity, cognitive linguistics treats the phenomenon of understanding or processing idioms differently. From the cognitive perspective, even seemingly opaque idioms can be interpreted based on the cognitive concepts and mechanisms speakers intuitively use when they analyse the meanings of utterances. Many authors have stressed and recorded the systematic clustering of figurative expressions around conceptual metaphors and metonymies (Lakoff & Johnson 1980; Kövecses 1986; Gibbs 1995). This implies that many of these expressions have a common underlying mechanism which is activated automatically and subconsciously in real time processing. In this view, conceptual metaphors and metonymies are both available and accessible in any context and can serve as a basis for understanding figurative language.

There are a number of linguistic expressions in which the underlying concept is that of the conceptual metaphor love is fire: to carry a torch for someone, the fire goes out between two people, to burn with love, the flames are gone, be someone's old flame, to have the hots for someone, be on fire. As a result of the relative universality of this conceptual metaphor across languages, it is possible, even for non-native speakers, to make appropriate connections on the conceptual

level and interpret some of these expressions. This is the case even when the expressions are encountered for the first time, and even when they do not have a full lexical and structural equivalent in their own language, or indeed any equivalent at all. This view, however, focuses on only one processing input, that of conceptual mechanisms, leaving out a number of factors I discussed above (the meanings of the individual lexemes that compose the idiom, contextual clues, etymology).

Dobrovolskij & Piirainen (2005) challenge the postulates of the cognitive theory of metaphor (CTM) as proposed by Lakoff & Johnson (1980), arguing that despite claims that many conceptual metaphors are universal (e.g. anger is the heat of a fluid in a container as the cognitive basis for someone's gall/bile flows over, which is not recognized by many native speakers of English, but is common in many European languages), many others are based on historical knowledge that, although perhaps no longer current, still contributes to the interpretation. The authors embrace the CTM as a valid and useful tool for analyzing conventional figurative language, but argue that the knowledge of underlying conceptual metaphors is insufficient and/or not linguistically relevant in all cases. The main points of criticism of the CTM are that it cannot account, or can only partly account, for the wealth and breadth of phraseological data across languages, and that it does not incorporate enough of the relevant cultural inputs that help shape the conceptual systems of different languages and cultures.

IV. CONCLUSION

Metaphorically speaking, in order to determine the meaning of an idiom, a complex functional relationship, or factor analysis, rather than a straightforward operation of addition is needed. In sum, idiom interpretation relies on some or all of the following interrelated operations or factors:

- cognitive mechanisms — conceptual metaphor and metonymy, conceptual mapping between and within domains;
- knowledge of the language — semantics, syntax, etymology, discourse analysis (contextual clues);
- knowledge of the world — cultural and historical background, imagery, symbolism.

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