



Event structure as a basis of semantic processing of familiar metaphors

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Abstract

In this paper I propose a model of metaphor interpretation that would account for the possibility that semantic processing of familiar metaphors no longer go through the sequential steps of alignment and projection, but may rather be established upon schematic semantic units allowing faster processing. The proposition is grounded on the notion that metaphors are formed based on peoples' perception of what is typically associated with entities. It is suggested that in its most abstract form, these associations are essentially events, analyzed in terms of event structure.

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1. Introduction

To understand semantic processing of figurative expressions, it is profitable to consider how such expressions initially came about. Very likely the sequence is that first, a behavior is observed (for example, a particular behavior of men in society); then, when the observer wishes to linguistically express this behavior, by algorithm, the mind searches for a word that shares the schematic as that of the observed behavior; the mind finds a lexical item (e.g., “wolves”) whose schematic matches that of the observed behavior. The linguistic expression is then realized as “men are wolves”. Based on this reconstructive examination, it is suggested that metaphors are not a mere product of juxtapositioning of two domains or a strategy of understanding one domain in terms of another. Rather, the speaker may have used metaphor as a way out after not finding a potent literal lexical item to convey her thought. Even still, it is likely that the speaker is fully aware that

the characteristic behavior being referred to is shared by animals other than wolves, but perhaps due to sociocultural factors, among the members of the category of creatures having the characteristic feature, wolf was selected.

Theoretical propositions for metaphor processing have largely revolved around the notion of conceptual mapping between two domains. Boroditsky (2000) purports that conceptual mapping serves to provide structure to concepts that do not directly rise out of experience.¹ Boroditsky suggests 3 types of concepts which directly arise out of physical experience, namely, (1) spatial relations; (2) physical ontological concepts; and (3) basic experiences; while all other concepts must be structured through metaphorical mapping. According to Gentner and Bowdle (2001: 226), mapping involves the sequential processes of highlighting existing systematic commonality pertaining predicates and/or attributes across domains, where by default, higher-order predicates enforce connections among lower-order ones (Gentner, 1983); alignment among arguments;

¹ As opposed to those that do, namely, spatial relations, physical ontological concepts, and basic experiences.

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and eventually, projection of existing logical implications across domains. In these processes, any link that can be aligned by analogical connectivity is a potential interpretation component, while nonsystematic components are disregarded.

Contrary to early theories of metaphors,² this approach does not see metaphor operation in terms of unspecific property attribution, but specifies the grounds by which two domains are aligned. The implication of the theory is that concepts have inner structure described as the systematic behavior of predicates and/or attributes (Gentner & Bowdle, 2001: 225). However, a question arises as to whether figurative meaning permanently is dependent on mapping of domains. While this process centers on systematic comparison, it is also likely that, as a commonality is established between domains, it is sufficient to only rely on the already identified commonly shared information thereafter.

Another possibility is that domain mapping may not be relevant at all. The downside of the above theory is that not all metaphoric figurative expressions carry the lexical items representing the domains being compared. In the following example,

(1) Modernization and tradition collide

no explicit lexical item is present to which “collide” is compared. Another example is

(2) a cold person (Ritchie, 2013)

in which mapping is not relevant because a counterpart of “cold” is not present. Thus there must be a way of explaining semantic processing not requiring two domains. The current study aims at finding a way of explaining metaphor semantic processing without domain mapping.

2. Literary review

According to Minsky (1975), information organized as a set of typically expected events is what constitutes a concept. For example, what information constitutes our knowledge of restaurants? According to Schank and Abelson (1977), a default sequence of associated events such as: selecting a table, selecting and ordering food, being served, eating, paying, etc. are central to our concept of restaurants. From a syntactic point of view, the word “restaurant” is a noun and the activation by reading or hearing of it may not immediately bring to mind the activities taking place inside a restaurant. Events, on the other hand, are primarily associated with the category of verbs.

² As the main concern here is to find an effective solution to metaphor processing in order to propose a model that provides effective grounding for computational processing, discussion of the prevailing debate between conflicting metaphor theoretical views is evaded, opting instead to focus on Minsky’s AI proposition of conceptual structuring, leading to the application of the principle to metaphors.

The theory therefore assumes a distinction between how a word is syntactically categorized at linguistic level and what it is comprised of conceptually.

In a study by Heider and Simmel (1944) where subjects evaluated animated objects in the form of line drawings of triangles, lines and a circle in a brief black and white film, the subjects recognized the interaction between the objects as the event of bullying. Such an interpretation may have been prompted from a behavior structure consistency between the movements of objects in the film and the social phenomenon of ‘bullying’. Because the film was void of any contextual cues and no human-like figure or social being were used, what motivated recognition must be abstract, being some form of framework. Boroditsky and Prinz (2008) suggests that such abstract frameworks are deep-seated schemas which are highly abstract modal-independent representations. In the above example, though the bullying schema was originally established by the identification of the real event of bullying, it is available for use for recognition of situations having the same event dynamics, but with different arguments involved. Because the schema is applicable to a non-real act of bullying, such schematic information are embedded at the conceptual level known as conceptual structure.

Jackendoff hypothesized that conceptual structure encodes human understanding of the world (Jackendoff, 1992: 10) and that it is “the locus for the understanding of linguistic utterances in context, incorporating pragmatic considerations and world knowledge” (Jackendoff, 2002). The theory known as the *language of thought* holds that our mind has its own language. Human language is interfaced with inference by this level of a mental representation (Pinker, 2007). Pinker postulates that it is here that the abstract frameworks relevant to human social and physical reasoning and practical inference are found.

Componential to conceptual structure, these schemas can be analyzed in terms of argument structure and event structure. Human beings have intuitive knowledge of the physical world to make sense of their lives, among which are causal texture which involves object, space, time, movement.³ Fine (2002: 254) posits that connections among events in the natural world are conditional necessities and so internal structure or typology of events, either as processes, states, or transitions, can be viewed in terms of conditional necessity and sufficiency. Pustejovsky’s (1995) Generative Lexicon provides a way of expressing information about the organization of a lexical knowledge base by a method called Lexical Typing, by which argument structure and event structure can be effectively described. The interest is to account for lexical meaning by “a dynamic approach including rules of combination and inference” involving levels of semantic representation for lexical items (Saeed, 2003: 277). In addition, Pustejovsky’s model

³ According to Talmy (2000), the human mind conceptualizes the world and experience in conjunction with 5 dimensions.

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