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Blending, Conceptual Metaphor and the Invariance Hypothesis

by
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La linguistique cognitive offre deux cadres pour analyser la métaphore: la Théorie de la métaphore conceptuelle et la Théorie de l'intégration conceptuelle. Cet article se propose de comparer et d'évaluer ces théories, les deux présentant des avantages et des inconvénients. Le présent article essaye aussi de répondre aux questions suivantes: Les deux théories sont-elles compatibles? Peut-on les intégrer en tant que perspectives complémentaires sur le même phénomène qu'est la métaphore? Enfin, l'auteur aborde la question difficile de l'hypothèse d'invariance qui guide le transfert de structures entre des domaines différents dans une métaphore conceptuelle; s'y ajoute une discussion à propos de la manière dont cet aspect de la métaphore est résolu dans la théorie de l'intégration conceptuelle.

1. Introduction

There are two frameworks in Cognitive Linguistics that can be used for analyzing metaphors: Conceptual Metaphor Theory (CMT) and Blending Theory (BT), also known as Conceptual Integration Theory. The cognitive linguistic research on metaphor began when Lakoff and Johnson (1980) introduced the (new, by then) notion of conceptual metaphor, involving two different domains of experience and establishing a number of correspondences or mappings between them, and argued for prior metaphorical ways of thinking that underlie the emergence of metaphorical language. Unlike many other metaphor researchers and theorists, Lakoff and Johnson (1980, 1999), Lakoff and Turner (1989), Kövecses (2002) and other cognitive linguists distinguish between conceptual metaphors in the mind and metaphorical expressions, which are linguistic realizations of conceptual metaphors. Much later, the notion of blending or conceptual integration was introduced by Fauconnier and Turner (cf. e.g. Fauconnier and Turner 1998, 2002, Turner and Fauconnier 1995, 1999, 2003, Lewandowska-Tomaszczyk 2006, Libura 2007, Kalisz 2008). What the two theories, CMT and BT, have in common is that "both approaches treat metaphor as a conceptual rather than a purely linguistic phenomenon; both involve systematic projection of language, imagery and inferential structure between conceptual domains" (Grady, Oakley, and Coulson 1999: 101). However, BT is not, strictly speaking, a theory of metaphor. It is a more comprehensive framework for investigating a wide range of different phenomena (including metaphors) in cognition, language, and other areas. As a general theory of cognitive processes, it is used for analyzing a diverse range of human creative products such as literature, movies, paintings, or advertisements.

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2. A comparison between the two theories

In this section, we will draw a comparison between CMT and BT. First, there are relevant differences between the models themselves: (1) domains in CMT versus spaces in BT, (2) a two domain model (CMT) versus a multiple space model involving at least four spaces (BT), (3) unidirectional mapping (CMT) versus selective projection (BT), and (4) emergent structure in BT, absent in CMT. Second, there are further differences in research goals: (5) the emphasis on conventional, stable organization of the conceptual system (CMT) versus dynamic meaning construction (BT), and (6) the search for generalizations in CMT versus the focus on specific examples in BT (cf. Evans and Green 2006: 435-437).

Conceptual metaphors involve entrenched mappings between comprehensive, stable domains of experience. A conceptual domain is "a vast organization of knowledge" that "has a basic structure of entities and relations at a high level of generality" (Turner and Fauconnier 1995: 183). Thus, metaphorical expressions based on conceptual metaphors can potentially evoke whole domains and our knowledge of them. Conceptual metaphor research constitutes an attempt to discover conventionally exploited mappings between two domains, called source and target, which can serve as the conceptual basis for a large number of metaphorical expressions, each based on some of those available mappings.

Blending, on the other hand, is a dynamic process, creating mappings between temporary mental spaces, which are "small conceptual packets constructed as we think and talk, for purposes of local understanding and action" and are "very partial assemblies containing elements, and structured by frames and cognitive models. They are interconnected, and can be modified as thought and discourse unfold" (Fauconnier and Turner 1998: 137). Mental spaces recruit small parts of larger conceptual domains, comprising only those elements, relations, and portions of knowledge from a domain which are relevant to a particular case: "Mental spaces (…) are not equivalent to domains, but, rather, they depend on them: spaces represent particular scenarios which are structured by given domains. (…) a mental space is a short-term construct informed by the more general and more stable knowledge structures associated with a particular domain" (Grady et al. 1999: 102). Thus, further information from domains can be imported to spaces in the form of relevant frames and models.

Conceptual metaphors involve two domains of experience, a source and a target, connected by means of mappings (see figure 1), while BT proposes a model with at least four mental spaces (see figure 2). Two of them, called input spaces, correspond roughly to the two domains in a conceptual metaphor, or rather to those subparts of the source and target domain relevant for a particular case of blending. However, there can be more than two input spaces, and metaphorical blending sometimes involves more than one source input space (cf. Crisp 2003: 110). Moreover, in BT there are two more spaces, which are quite unlike conceptual domains and thus have no counterparts in CMT: a generic space, containing schematic structure common to both input spaces, and a blended space, which is a complex combination of selected elements and relations from the two input spaces.

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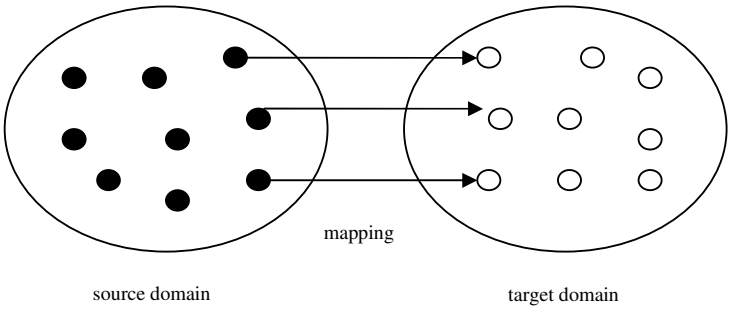


Figure 1. Conceptual metaphor

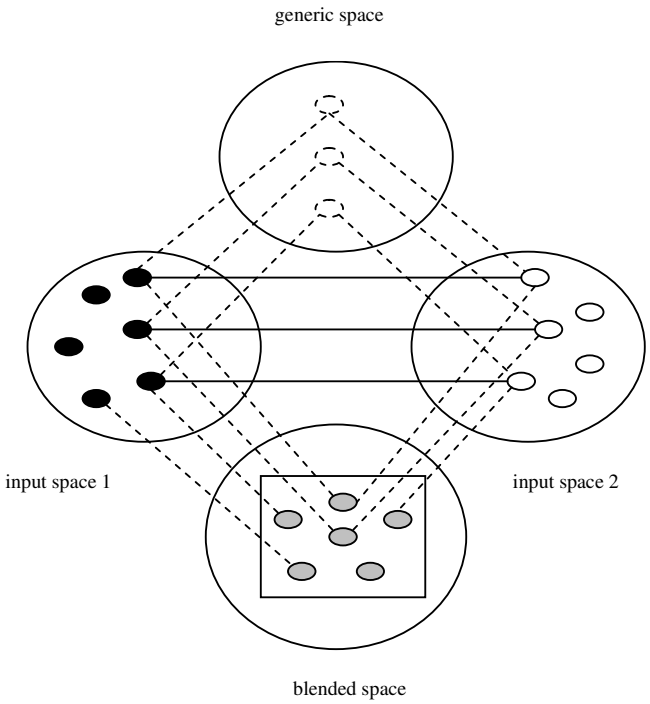


Figure 2. Blending

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In the two-domain model of CMT, the mapping between the source and the target domain is believed to be unidirectional: the structure of the source domain is transferred onto the target domain. Blending, on the other hand, is more flexible and can involve selective projection of structure from both input spaces to the blended space. BT, however, can also account for cases of unidirectional mapping, in the form of single-scope networks, in which only one of the input spaces projects structure to the blended space, as opposed to double-scope networks, in which both input spaces project some structure to the blend. Thus, CMT, because of its reliance on the simple two-domain model, is unable to explain cases of emergent structure, i.e. structure present in neither of the domains. As a result of introducing the blended space and selective projection, BT can account for new structure emerging in the blend itself, not present in any of the input spaces prior to the blending process, but resulting from the combination of elements and relations projected to the blend. Constructing the blend is based on three processes: *composition* (combining elements from the input spaces), *completion* (recruiting background conceptual structure and knowledge to complete the pattern), and *elaboration* (developing the blend by means of mental simulation, also called "running" the blend). Consequently, BT can explain both those cases of metaphor in which the overall structure of the source is imposed on the target and those in which some elements of the structure of the target, absent from or different from the structure of the source, are preserved and merged in new ways with the source structure. Such cases pose problems for CMT, which is unable to account for them (cf. section 3).

Apart from these fundamental differences between the models, there is also a divergence in methodological emphasis. While CMT concentrates on investigating entrenched conceptual metaphors, BT focuses mainly on dynamic processes of meaning construction in novel, unconventional metaphors, although metaphorical blends can become conventional too. As a result, researchers interested in conventional metaphorical expressions might prefer CMT, whereas those dealing with creative metaphorical expressions, such as those found in poetry, tend to favor BT. In this respect, the two theories might be considered as complementary, concentrating on two poles of a continuum of metaphors, ranging from conventional to novel. Consequently, CMT researchers attempt to make generalizations over a large collection of conventional metaphorical expressions (cf. Lakoff and Johnson 1980) or creative ones complying with the same conventional conceptual metaphors (cf. Lakoff and Turner 1989), whereas BT researchers focus on individual examples and their detailed analyses. CMT studies, striving for broad generalizations, tend to disregard the subtleties of individual examples and so their results are not always convincing. BT analyses, on the other hand, while detailed and in-depth, are isolated from each other and, as a result, no general conclusions concerning systems of knowledge and the ways people conceptualize their experience can be drawn from them. Perhaps the best course would be to combine attention to detail with attempts at justified generalizations.

Grady et al. (1999: 121-122), however, even though promoting cooperation between CMT and BT, claim that metaphor comprises two distinct conceptual phenomena and that each of them should be addressed individually by means of the theory most suitable to deal with it: "Because it is useful to separate entrenched associations in long-term memory from the on-line processes that

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recruit them, (…) the former issue is the province of metaphor theory, and the latter, the province of blending theory" (Grady et al. 1999: 121).

Another difference has already been signaled in the introduction: BT is a more comprehensive theory than CMT and not all blends are metaphorical. A more general theory, such as BT, able to account for a large number of different phenomena, seems preferable to a theory of limited application. On the other hand, there is a danger that using such a general theory will obscure differences between various phenomena. The notion of metaphor might be blurred and the distinctive qualities of metaphor ignored (cf. Fauconnier and Turner 2002: 154). This, however, is a danger that can be avoided if we pay due attention to the above mentioned issue.

For instance, Grady et al. (1999) point out unique qualities of metaphorical blends, making them distinct from other kinds of blends. First, since in metaphors one thing is conceptualized in terms of another, in metaphorical blends "prominent counterparts from the input spaces project to a single element in the blended space – they are 'fused'" (Grady et al. 1999: 114). Unlike in other kinds of blends, these counterparts are incompatible in many respects but such discordant aspects are ignored, overridden, and not projected to the blend. Second, the input spaces of metaphorical blends are not of equal status: "One of the inputs is topical and the other provides a means of re-framing the first for some conceptual or communicative purpose; these are, respectively, the target and source inputs of the metaphor" (Grady et al. 1999: 117). Finally, it should be pointed out that there are scholars who see the two approaches as complementary and compatible rather than competing or mutually exclusive, and some researchers apply elements of both theories in their practical studies of metaphors in literature (cf. e.g. Csábi 2001, Kosiński 2007). Grady et al. (1999: 101-110) argue that the two theories are complementary in the following way. Conventional conceptual metaphors, discovered and investigated by CMT researchers, create stable correspondences between elements in two different domains. As spaces involved in blending are based on larger domains, these already established connections between domains are exploited in the creation of links between spaces. Thus, conventional conceptual metaphors can serve as "the starting points for the process of creating complex conceptual blends" (Grady et al. 1999: 113). The researchers conclude that "because they tackle different aspects of metaphoric conceptualization, the two frameworks are largely complementary. The conventional conceptual pairings and one-way mappings studied within CMT are inputs to and constraints on the kinds of dynamic conceptual networks posited within BT" (Grady et al. 1999: 120, cf. also Fauconnier and Turner 1998: 179-180). Similarly, Crisp (2003) claims that metaphorical blending is often based on entrenched conceptual metaphors, unless a new, original metaphor is constructed: "If a completely new metaphor is created then four new spaces will be created. More typically, (…) the source and target spaces, and so the generic space, are set up on the basis of one or more conventional metaphors" (Crisp 2003: 110).

On the other hand, Fauconnier and Turner (1998) suggest that the development of such metaphorical mappings is based on blending. In their opinion, many conventional metaphors studied within CMT are in fact conventional blends, but when "the mapping from source to target becomes thoroughly conventional (…) it is possible to overlook both blend and generic

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space" (Fauconnier and Turner 1998: 181). Yet if conceptual metaphors are *the result* of blending themselves, how can blending be claimed to be *based on* conceptual metaphors? Moreover, we have already pointed out that not all blends are metaphorical. Metaphorical blends are only one type of blending, and all the other types operate without the need for entrenched conceptual metaphors. Are metaphorical blends different in this respect? Or can they, like other kinds of blends, appear without prior conceptual metaphors? It seems likely that many conceptual metaphors began as dynamic, creative blends and later became entrenched and conventional. Some types of conceptual metaphors, though, such as primary metaphors based on experiential correlations (e.g. MORE IS UP) could not have appeared as a result of blending, and they could be regarded as possible inputs to blending, originating independently of the process itself (cf. Grady 2005). Entrenched conceptual metaphors may make new cases of blending easier; however, it is doubtful whether conventional conceptual metaphors are a necessary prerequisite for metaphorical blends, especially since there are unconventional metaphorical blends too. What is perhaps more important is that conceptual metaphors, evoked in many blends, may help us see connections and similarities between individual cases of blends making use of the same pairings of experiential domains.

3. Blending and the Invariance Hypothesis

An important part of CMT is the Invariance Hypothesis (or Principle) guiding the transfer of structure from the source to the target domain. However, the principle is problematic. In this section, we will discuss the hypothesis and its criticism and then see how the phenomenon of structure transfer is handled by BT and whether BT has overcome these difficulties and can offer a better alternative to CMT.

Lakoff (1990) argues that "many abstract concepts arise from metaphorical mappings of spatial concepts and that abstract reason arises via metaphorical mapping when the cognitive topology of image-schemas is preserved by the mapping, which in turn preserves the inferential structure of those spatial concepts" (73). The Invariance Hypothesis is an attempt to determine and formulate constraints on the transfer of image-schematic structure from the source to the target domain. Different, stronger and weaker, versions of the hypothesis have been proposed. Lakoff (1990) provides the following formulation: "Metaphorical mappings preserve the cognitive topology (this is, the image-schema structure) of the source domain" so that "all source domain inferences due to cognitive topology (image-schema structure) will be preserved in the mapping" (54), but adding later: "All metaphorical mappings are partial. What is mapped preserves image-schematic structure, though not all image-schematic structure need be mapped" (Lakoff 1990: 72).

Turner (1990a), on the other hand, emphasizes that "we are constrained not to violate whatever image-schematic structure may be possessed by nonimage components of the target" (473) and proposes the following statement of the principle: "In metaphoric mapping, for those components of the source and target domains determined to be involved in the mapping, preserve the image-schematic structure of the target, and import as much image-schematic structure from the source as is consistent with that preservation" (Turner 1990b: 254). Later, Lakoff (1993) admits too: "Metaphorical mappings preserve the cognitive topology (that is, the image-schema structure) of the source domain, in a way consistent with the

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inherent structure of the target domain" (215). So what is actually preserved in the mapping: the structure of the source or the target? Or both? In what ways? Moreover, if in CMT abstract target domains are assumed to be structured metaphorically in terms of physical source domains, where does their prior, inherent structure, which cannot be violated by metaphorical mappings, come from?

Thus, the Invariance Hypothesis gives rise to more questions than answers and has met with reservations from the very beginning (e.g. Brugman 1990, Stockwell 1999). Haser (2005: 148-150) and also Pawelec (2006: 49-50) question the view that conceptual metaphors enable the transfer of structure from a more clearly delineated, more concrete source domain to a more abstract target domain in order to help people understand the abstract domain. Both critics argue that people usually have some prior and independent knowledge and understanding of the target domain and its inherent structure, which enables them to notice a sufficient analogy between the two domains, as a prerequisite for creating a metaphor. According to Haser (2005: 165-166), it may even be necessary to possess some independent knowledge of the target domain prior to the metaphorical transfer in order to be able to understand a metaphorical expression.

It is plausible that more abstract domains of experience possess some inherent structure of their own, prior to and independent of metaphorical transfer from more concrete domains. The structure of abstract domains is not physical structure but is probably based on social and cultural experiences of those domains, for instance, on interactions between people involved in particular situations and on the sequence of activities or events, giving rise to various frames and cognitive models. It appears, then, that abstract concepts and abstract thought do not have to be exclusively based on and metaphorically derived from bodily experience and image schemas, as Lakoff and Johnson (1980, 1999) argue.

In what way does BT deal with these issues? This theory acknowledges the existence of structure in both input spaces, structure prior to and independent of the blending process. The structures of the input spaces are usually inconsistent with each other in some respects and may clash to some extent, though not necessarily. The generic space captures what the inputs' structures have in common, "skeletal structure that applies to both input spaces" (Turner and Fauconnier 1995: 184), i.e. shared schematic representation of more specific elements and relations. "Whatever structure is recognized as belonging to both of the input spaces constitutes a generic space. (…) It defines the current cross-space mapping between them" (Fauconnier and Turner 1998: 143). Thus, the generic space identifies correspondences between the input spaces and establishes the mappings between them. As Libura (2007: 18) points out, this aspect of determining common, analogical structure of the two domains was neglected or avoided in CMT, and it is only in BT that it receives due attention. From the point of view of BT, there are two kinds of metaphors, represented by two types of conceptual integration networks: a single-scope network and a double-scope network (Fauconnier and Turner 2002: 154). In single-scope network metaphors, the structure in the blended space is imported from only one of the input spaces, the source: "A single-scope network has two input spaces with different organizing frames, one of which is projected to organize the blend. (…) the organizing frame of the blend is an extension of the organizing frame of one of the inputs but not the other" (Fauconnier and Turner 2002: 126). This case corresponds to typical metaphors discussed within CMT, in which the structure

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from the source domain is preserved and transferred to the target domain: "The input that provides the organizing frame to the blend, the framing input, is often called the "source." The input that is the focus of understanding, the focus input, is often called the "target"" (Fauconnier and Turner 2002: 127).

In double-scope network metaphors, on the other hand, there is partial projection to the blended space of structure from both input spaces, the source as well as the target: "A double-scope network has inputs with different (and often clashing) organizing frames as well as an organizing frame for the blend that includes parts of each of those frames and has emergent structure of its own. (…) both organizing frames make central contributions to the blend" (Fauconnier and Turner 2002: 131). In the resulting blend, the two partially projected structures may be combined in new, original ways to yield a coherent whole. Unlike in the cases analyzed by CMT, where the target domain is structured in terms of the source domain, the target input space can impose parts of its own structure on the blend, overriding some aspects of the structure of the source input space inconsistent with it. As Fauconnier and Turner (1998: 180) argue, "if there is a clash of topology between source and target, then since it is the target we care about, we typically prefer the topology in the target: structure in the blend needed to deliver inferences for the target will accord with the important image-schematic structure in the target as opposed to the source."

Let us illustrate these two cases with two conventional metaphorical expressions, one discussed by Fauconnier and Turner (1998, 2002): *You are digging your own grave*, and another one with a more or less similar meaning: *You are going in the wrong direction*. Both of them could be used as a warning in a situation in which a person is mistaken and keeps doing something imprudent that will lead to failure. The example *You are going in the wrong direction* is a typical case that can easily be analyzed by CMT. It can be said to be based on a conventional conceptual metaphor PURPOSES ARE DESTINATIONS. The structure of the source domain, i.e. journey, together with its inferences, is mapped onto more abstract actions, such as e.g. making investments. The person making decisions corresponds to a traveler, her actions correspond to traveling along a path, and the purpose of the actions corresponds to the destination. Prudent actions, which help the person to achieve the purpose, correspond to traveling along the right path, leading to the destination, while imprudent actions, which prevent her from achieving the purpose, are wrong paths or wrong directions leading away from the desired destination, and possibly toward an undesirable one. Here, the structure of the source domain of a journey is mapped onto the domain of abstract actions. Within BT, this example can also be easily analyzed by means of a single-scope network, in which the structure of only one of the input spaces, that of traveling, is projected to the blended space and provides overall structure for the blend.

According to Fauconnier and Turner (1998, 2002), *You are digging your own grave* is a more complex example, which could not be explained by CMT but can be accounted for with the help of BT as an instance of double-scope blending. In this case, we have two opposite causal and temporal structures inconsistent with each other. In the target, the present imprudent actions of the person will lead to her failure in the future. In the source domain of death and funeral, however, the order of events is different. First, a person dies, and then, as a result, someone else, a gravedigger, digs a grave for the dead person. Normally, the dying

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individual does not dig her own grave before her death and when a gravedigger digs a grave, it does not lead to his death. Here, the causal and temporal structure of the target, which is more important and cannot be violated, is projected to the blend and overrides the causal and temporal structure of the source. Moreover, the two separate people in the source space, the dying or dead person and the gravedigger, become one and the same person in the blend. As a result, in the blend, digging the grave finally leads to the death of the person digging it, who is unaware of the future disastrous consequences of this action. However, not all researchers agree with Fauconnier and Turner's analysis of this example in terms of a double-scope network (cf. Krikmann 2007, Ritchie 2004). For instance, they claim that the expression might be motivated by the knowledge of people dying as a result of being ensnared or buried alive in holes, such as traps or mines, which they dug themselves prior to their death. It is not certain, though, whether such a scenario could provide the source space for the metaphor, since conceptualizing and calling a trap or a mine someone's grave is itself metaphorical.

Libura (2007: 59-63) argues that, unlike double-scope networks, single-scope networks do not really involve the process of blending, as no new structure emerges in the blended space, and they should be called simply "metaphors" rather than "blends." She proposes that the term "conceptual integration" should comprise all types of networks, reserving the term "blending" for cases where emergent structure appears (as in double-scope networks). This suggestion appears reasonable, although it seems mainly a matter of terminology. Moreover, as there are metaphors of both kinds (represented by single- and double-scope networks), it might not be desirable to introduce too great divisions between them, especially since the two processes share so much with each other.

4. Conclusion

To conclude, it appears that BT is a more elaborate and more flexible framework than CMT, thus enabling researchers to analyze various complex cases, as well as simple ones, and to account for them. BT can explain a wider range of different types of metaphors, overcoming the limitations and ambiguities of the Invariance Hypothesis, which becomes unnecessary once we have at our disposal the generic and blended space, in addition to the source and target, together with different types of conceptual integration networks, such as single- and double-scope networks. BT is especially useful in studies of novel, creative, original, and complex metaphors. For instance, Crisp (2003: 110) points out that BT is better adapted to analyzing literary and poetic metaphors, which frequently involve combinations of several distinct metaphors, since in BT we can have more than two input spaces. There are, however, some drawbacks of BT. First, CMT allows researchers to make insightful generalizations about human metaphorical conceptualization of large domains. This is an important achievement usually missing from BT analyses of individual cases. Second, the distinction between conceptual metaphors and metaphorical expressions on the one hand and other cognitive and linguistic phenomena on the other, and even between linguistic and non-linguistic creative products, such as literature and visual arts, is blurred.

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