

Tanulmány

István Pálincás

Metaphor, Irony and Blending

Abstract

The article investigates metaphor and irony and compares them with respect to their representation. The primary aim of the study is to find commonalities and differences between the processing mechanisms of these figures of speech at the cognitive level of organisation.

The paper shows that conceptual integration (blending) is a justifiable framework in a comparative analysis of the understanding of metaphor and irony. The findings indicate that, although the representation of both figures incorporates a blending mechanism, their understandings presuppose basically different cognitive entities and patterns.

Keywords: conceptual integration, blending, irony, metaphor, understanding

1 Introduction

Figurative language usage is a ubiquitous aspect of everyday communication. In a couple's life, for example, the *metaphor* "*We are at a crossroads*" could mean that choices have to be made about the relationship. In another situation where a couple has planned a trip for the weekend for which the weather forecaster predicted nice weather but it proved otherwise, the wife could *ironically* express her disappointment by saying "*What beautiful weather we have today*".

Researchers from a variety of disciplines attempt to explicate different aspects of metaphor and irony, sometimes with the purpose of identifying commonalities and/or differences between them. Winner and Gardner (1993), for instance, argue that metalinguistic awareness (that is, the ability of the hearer to realise that there is some mismatch between what a speaker says and what he means) has a different role in understanding metaphor and irony: while in the case of metaphor, 'metalinguistic awareness' does not necessarily go parallel with 'interpretive understanding', the representation of irony presupposes their concurrent activation. In another study, Colston and Gibbs (2002) claim that irony is understood differently than metaphor, since understanding irony (but not metaphor) needs metarepresentational reasoning on the part of the comprehender. Giora et al. (2000) assessed the performance of left- and right-brain-damaged individuals on metaphor and irony understanding and found that while right hemisphere participants had difficulties understanding non-salient irony, left hemisphere

patients were impaired in their representation of conventional (salient) metaphors.¹ According to Giora and her associates, this supports the idea that salient meanings are processed in the left hemisphere and less salient meanings are processed in the right hemisphere (see also Burgess & Simpson 1988, Van Lancker & Kempler 1993). Eviatar and Just (2006) also show differential hemispheric sensitivity to metaphor and irony and argue that while metaphor comprehension involves some degree of visual imagery, the representation of irony is a matter of semantic/logical processes rather than of, what they call, a “visual transformation”. A somewhat opposing view is taken by Winner (1988), who claims that the comprehension of irony is a social-analytic exercise in which the hearer is expected to recognise the speaker’s beliefs and attitudes. In contrast, the representation of metaphor is primarily a logical-analytic task in which the hearer must recognise matches between divergent aspects of experience (see also Katz 2005). Winner also states that metaphor and irony differ in terms of both function and structure: the functional difference is that while metaphor is used to *describe* (as in “*The world is a desert*” to express ‘emptiness’), irony is applied to *evaluate* (as in Winner’s example, in which Hamlet, by saying “*Thrift, thrift, Horatio! The funeral baked meats/Did coldly furnish forth the marriage tables.*”, bitterly jokes about the timing of her mother’s marriage by ironically stating that the real reason his mother got married again so soon after her husband’s death was that she could save money by serving the leftover funeral refreshments to the wedding guests). From a structural point of view, the difference between the two figures of speech is that while metaphor is a matter of similarity, the essence of irony is the relation of incongruence (see also Winner & Gardner 1993, Colston & Gibbs 2002). A further significant difference between the two figures was identified by Gibbs and O’Brien (1991), who contend that unlike ironic statements, metaphors invite further elaborations of their meanings once understood. Kreuz and Caucci (2009: 327) also compared metaphor and irony and argue that “identifying ironic statements in context is more difficult than identifying metaphors”, since most common metaphors (like, for instance, “*The road was a snake*”) have a rather evident literal connection between the domains involved (that is, ‘curvy’, for instance, serving as the literal connection between ‘road’ and ‘snake’ in the above example). In terms of irony, no such literal connection exists. Finally, Kreuz et al. (1999) draw attention to the fact that if a hearer fails to identify the proper pragmatic cues and constraints (for example, the ironic tone of voice or various kinesic features), irony can easily be misunderstood (might be taken in a non-figurative sense). Along these lines, the literal interpretation of an ironic statement is at least plausible. As opposed to this, as Kreuz and his associates claim, few people would interpret metaphors (e.g. “*The road was a snake*”) as literal statements.²

¹ The literature has also provided evidence for *right* hemisphere involvement in metaphor comprehension (Bottini et al. 1994, Brownell 1984, 1988, 2000, Pynte et al. 1996, Vitacco et al. 2002), and for *left* hemisphere functioning in the representation of irony (Shamay-Tsoory & Aharon-Peretz 2007, Uchiyama et al. 2006, Wang et al. 2006, Zaidel et al. 2002). However, only few of these studies (e.g. Pynte et al. (1996)) are *primarily* concerned with the ‘conventionality’ of the experimental items.

² It should be noted in passing that Kreuz et al.’s (1999) distinction is consistent with the idea that irony should *not* be seen as figurative in the same sense as metaphor: in most cases, (verbal) irony is used to express negative evaluation on the part of the speaker and requires the hearer to *decipher* an implied message. As an example, consider the situation in which someone is apparently bored at a party and expresses his disappointment in an ironic fashion by saying “*I’m having an absolutely wonderful time*”.

On the other hand, one of the figurative functions of metaphor is to express the “(literally) inexpressible” (Cacciari 1998: 121). Consider the example of ‘a warm, richly textured organ chord’, which alludes to the sensory experience of an “auditory timbre” (cf. Beck 1978, Marks 1982). This metaphor is used to describe something (an organ chord) in terms of (knowledge about) other domains of experience (heat, texture/cloth).

Besides differences between metaphor and irony, however, these two figures can be related in a number of ways: first, as Colston and Gibbs (2002) argue, the cognitive processes behind understanding metaphor and irony might not be different. Second, Rapp et al. (2010) found that the brain region called the ‘left inferior parietal lobule’ is involved in the comprehension of both figurative phenomena discussed. Third, Camp (2006), Frith and Frith (2003), Griffin et al. (2006) and Happé (1993) claim that both metaphor and irony presuppose “mentalizing” (or, in other terminology, ‘theory of mind’) capabilities, which incorporate a hearer’s implicit ability to attribute mental states to others. Finally, Regel et al. (2010) argue that pragmatic knowledge seems to influence the interpretation of the communicative intent of both figures.

The present paper further investigates metaphor and irony in terms of similarities and potential differences in the way these figures of speech are understood. In my analysis I will compare metaphor and irony in relation to the role conceptual integration plays in their representation. The theoretical framework for the examination of irony is Blending Theory (Fauconnier & Turner 1994, 1998, 2002), which presupposes a set of cognitive operations for combining mental content from multiple conceptual spaces. The analysis of irony in that framework will then be compared to a model of metaphor in which conceptual integration is also fundamental. Before delving into the comparative analysis, however, let us see how those figures can be interpreted in terms of conceptual integration.

2 What is Metaphor?

2.1 *The Lakoffian View of Metaphor*

In its history, metaphor has been explained under different theoretical paradigms. This section provides an outline of some of the most articulated ones and describes my understanding of metaphor in Blending Theory (Fauconnier & Turner 1994, 1998, 2002).

For more than 2,000 years metaphor was studied within the discipline called rhetoric. This area of science originates in ancient Greece, and aimed to improve the ability of speakers and writers trying to persuade and motivate others by the use of rhetorical devices. Metaphor, which was characterised by the paradigmatic form ‘A is B’, was the most important among those devices (tropes) and was known as the ‘master trope’.

Aristotle (Poetics XXI, 1457b) defines metaphor as “... giving the thing a name belonging to something else, the transference being ... on the grounds of analogy”. Since Aristotle, then, metaphor has been identified with implicit comparison. Furthermore, traditionally metaphor was viewed as a nonstandard meaning that is used for some literary effect. This idea was more succinctly worded by Quintilian (VIII, VI, 1), who defined metaphor as “the artistic alteration of a word or phrase from its proper meaning to another”.

In contrast to viewing metaphor as a literary device, cognitive semanticists, especially from the 1980s began to view metaphor in a unique way: in their Conceptual Metaphor Theory, Lakoff and Johnson (1980) propose that metaphor is not simply a stylistic feature of language,

In my view, the two aspects of figurativeness (ironic, metaphoric) should be considered on a different level not only in relation to their application/nature but also as to the risk of misunderstanding: deciphering an implicated message, as in an ironic example, can leave more room for literal (non-figurative) misinterpretation than can describing something in terms of other domains of experience (as in metaphors). This, of course, does not mean that metaphors cannot be (and occasionally are not) misconceived (see, for example, Janicki 2006).

and that human thought itself is fundamentally metaphorical. According to this view, conceptual structure is organized by cross-domain mappings or correspondences. Some of those mappings are due to pre-conceptual embodied experiences while others are based upon those experiences to form more complex conceptual structures. For example, QUANTITY might be conceptualised in terms of VERTICAL ELEVATION, and this can give rise to expressions as the one below:

- (1) Gas prices are rising again.

According to Conceptual Metaphor Theory, the conceptual domain QUANTITY is conventionally structured and therefore understood in terms of the conceptual domain VERTICAL ELEVATION. That is, metaphorical linguistic expressions are simply reflections of an underlying (or embodied) conceptual association.

An essential element of the Lakoffian view of metaphor is the so called Invariance Principle (Lakoff 1990), which is of particular relevance for the purposes of this paper in relation to the following points: firstly, it states that metaphorical mappings should preserve the cognitive topology of the source domain. That is, if, for instance, the remark “*Our relationship has hit a dead-end street*” is understood as a metaphor, which is actually built upon the conceptual metaphor LOVE IS A JOURNEY, the cognitive structure (what Lakoff actually calls Idealized Cognitive Model) of the more concrete source (JOURNEY) and the more abstract target (LOVE) domains should be related in order for the process of metaphorical mapping to be smooth and successful. For a list of mappings in the LOVE IS A JOURNEY metaphor, consider Table 1 below (taken from Evans & Green 2006: 295):

SOURCE : JOURNEY	MAPPINGS	TARGET: LOVE
TRAVELLERS	→	LOVERS
VEHICLE	→	LOVE RELATIONSHIP
JOURNEY	→	EVENTS IN A RELATIONSHIP
DISTANCE COVERED	→	PROGRESS MADE
OBSTACLES ENCOUNTERED	→	DIFFICULTIES EXPERIENCED
DECISIONS ABOUT DIRECTION	→	CHOICES ABOUT WHAT TO DO
DESTINATION OF THE JOURNEY	→	GOALS OF THE RELATIONSHIP

Table 1: Cross-domain mappings of the LOVE IS A JOURNEY metaphor

As the above table indicates, in the dead-end street example the travellers in the source domain correspond to the lovers in the target domain, the vehicle to the love relationship, the destinations in a travel to common life goals, impediments (like a dead-end street) in a journey to difficulties in a relationship, and so on.

The second tenet of Lakoff’s Invariance Principle is that (during metaphor comprehension) only those aspects of the source are carried over to the target that are consistent with it. So, in our LOVE IS A JOURNEY metaphor we do not think of the ‘end of love’ as something/a destination to be reached.

Once related structure has been identified between the two domains (LOVE and JOURNEY), the process of metaphorisation flows smoothly, gets completed and the implication of the speaker’s remark will arise: decisions have to be made in/about the relationship.

Having recapitulated the main tenets of Lakoff’s view of metaphor, let us now consider another theoretical model which will be treated as complementary to the Lakoffian paradigm in my treatment of this figure.

2.2 Blending Theory

A more recent framework proposed by Fauconnier and Turner (1994, 1998, 2002) seeks to provide an alternative account for much of the linguistic data that were explained by Lakoff's Conceptual Metaphor Theory. This framework is known as Blending Theory, which argues that meaning construction fundamentally involves the integration of mental structures. Blending theorists claim that the process of conceptual integration is a general and basic cognitive operation, which is central to the way we think.

Conceptual integration networks involve at least two input mental spaces, a generic space and a blended space. Input spaces constitute "small conceptual packets constructed as we think and talk, for purposes of local understanding and action" (Fauconnier & Turner 2002: 40). The generic space provides information that is abstract enough to be common to both (or all) the inputs. The blended space is formed by means of selective projection from the inputs and it also gives rise to a new emergent structure.

For a blending analysis of an example which is also treated as a metaphor in, for instance, Grady et al. (1999), consider "*The committee has kept me in the dark about this matter*". Figure 1 provides a schematic representation of the conceptual integration network associated with this example:

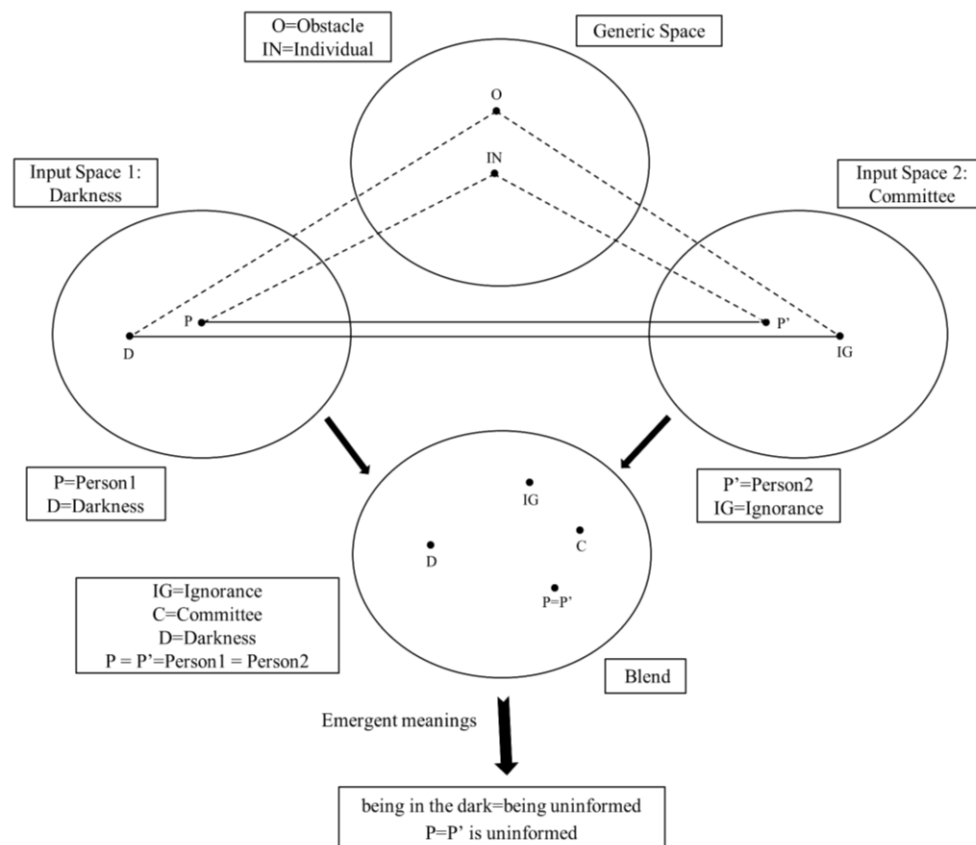


Figure 1: Conceptual integration network: "*The committee has kept me in the dark about this matter*"

As the straight lines in Figure 1 indicate, blending results in identifying relational structure between the two input spaces. This structure emerges through conceptual integration, during which selected content is projected from the inputs into the Blend. As is indicated in the

Generic Space (and also by the dashed lines), blending operations also illuminate abstract correspondences that exist between the input mental spaces.

In more detail, Input Space 1 shows a person (P) who is standing in the dark. Since the (literal) expression ‘keep somebody in the dark’ is strongly associated with deliberate action and physical confinement, P could be conceptualised as an individual who is perhaps captivated or locked up in a dark room. Because of the darkness he is unable to perceive the world around him. The Committee Space, on the other hand, reveals a board which is in charge of both making a decision and also of informing another person (P’) about their resolution³.

Information is projected selectively from the inputs into the Blend. That is, only partial and contextually relevant content is imported into the space of conceptual integration.⁴ From the Darkness input, darkness and information about a person who is in a dark place and hence unable to see his environment are imported. Pragmatically irrelevant aspects of this conceptualisation, such as P’s marital status or his educational record, are probably not projected into the blended space. From the Committee Space, the board itself and an individual waiting for the committee’s decision are imported. Other aspects of meaning such as the proportion of male-female members in that (imaginary) board do not seem to have any relevance in the comprehension process, and so are not imported into the Blend.

Processes in the Blend consist of composition, completion and elaboration (Fauconnier & Turner 1994, 1998, 2002). Composition involves establishing a relation between the Darkness Space and the Committee Space. In this process, the Blend illuminates related structure between Input Space1 and Input Space 2: the person standing in the dark (P) maps onto the person who is awaiting the committee’s decision (P’), and ‘darkness’ onto ‘ignorance’ (on the part of the board), since both can be seen as impediments to accessing some information.

Completion makes further background knowledge available. In our example, this process can add information, for instance, about the actual appearance of the person in the dark or may depict a committee in an official setting: sitting around a table, wearing uniforms, the decision-making process itself, and that committees consult upon a person without him present and inform him as soon as the members have come to a decision. Withholding their resolution from the person concerned is considered unfair.

Elaboration refers to the process of compressing the information from the Input Spaces into the Blend. In our example, the two persons P and P’ are ‘compressed’ into the same person (P=P’). The Blend evokes a picture in which “a committee is causing an individual to remain in the dark” (Grady et al. 1999: 422). At the same time, the physical and perceptual state of being in the dark is identified as being (metaphorically) identical to being uninformed/ignored.

³ In Grady et al.’s (1999) analysis of the committee example the input Committee Space involves a board which has withheld information from an individual. In my view, however, the committee’s deliberate intention to keep that person uninformed is not *inherently* part of that input – as initially conceptualised by the hearer on hearing and comprehending the first part of the utterance (“*The committee [...]*”). Rather, the implication that the committee has kept the individual uninformed (about some matter) will emerge in the *Blend*, as a result of conceptual integration. This idea, which is also confirmed in Grady et al. (1999), is in contrast to the view that deliberate ignorance is already/originally present in the Committee Space (as initially conceptualised by the hearer). Therefore, in Figure 1 the darkness-ignorance association is actually the result of the *after- or during-Blend* realisation of similarity/mapping between the inputs.

⁴ This, however, does not mean that elements of content that are controversial would *not* occasionally be projected into blends. Consider the example “*This surgeon is a butcher*”, whose analysis in a conceptual integration framework involves a blend in which, among others, a living patient and a dead animal are co-present. Also, as we shall see later, ironic blends also contain contradictory material.

Also, by withholding information from P', the committee causes that person to remain in the state of being unaware of some knowledge. These two meanings are emergent.

Finally, the conceptual integration network of the committee example also contains a Generic Space, which involves an individual (IN) who has no access to particular information. Also, as suggested, at some moment during the comprehension process, the conceptualizer might identify both darkness and ignorance as being impediments to getting access to particular information (visual and intellectual, respectively). This means that obstacle (O), as such, can also be considered a legitimate constituent of the Generic Space.

2.3 A Complementary View of Metaphor

The above discussion explained metaphor and conceptual integration through different linguistic phenomena: the comprehension of “*Our relationship has hit a dead-end street*” was explained in metaphorical terms, while the representation of “*The committee has kept me in the dark about this matter*” was considered a matter of conceptual integration. The explanations of these two processes reveal that metaphor and conceptual integration are actually two different processing mechanisms that work under different assumptions: while metaphor involves more abstract and highly stable knowledge structures called ‘domains’ (LOVE, JOURNEY), blending incorporates the activation of ‘mental spaces’ (“small conceptual packets constructed as we think and talk, for purposes of local understanding and action” (Fauconnier & Turner 2002: 40)) like a person standing in a dark place and a committee sitting around a table, making decisions, and so on.

Despite the differences between metaphor and conceptual integration, however, these two processes can be seen as complementary mechanisms⁵ (see also Coulson 2006a, Coulson & Matlock 2001, Coulson & Van Petten 2002, Fauconnier & Turner 2008, Grady et al. 1999): every metaphor could be considered a matter of *both* blending and mapping processes, the first involving two basic phases: alignment and evaluation.⁶ Consider Figure 2 below:

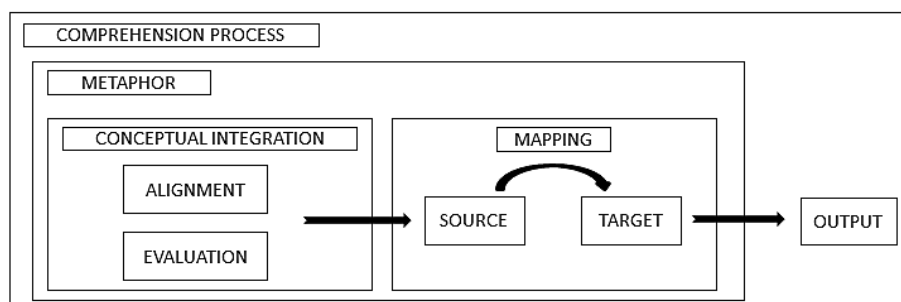


Figure 2: A schematic representation of the complementary view of metaphor

⁵ For a similar claim made in terms of the development of modal meanings in English, see Pelyvás (2002).

⁶ Evens and Green, however, argue that there is a subset of metaphors that cannot be considered blends. These ‘primary metaphors’ (e.g. SIMILARITY IS NEARNESS, IMPORTANCE IS SIZE, QUANTITY IS VERTICAL ELEVATION) are based upon correspondences between concepts rather than domains, and they are “established on the basis of close and highly salient correlations in experience which give rise to a pre-conceptual correlation rather than a matching operation at the conceptual level” (2006: 437).

Another important point to note is that the complementariness of blending and metaphor is also true in relation to the operation of some blends. As an illustration, consider the committee example (analysed as a blend), whose representation inherently contains the metaphor ‘darkness is ignorance’.

In the alignment stage conceptual content coming from different input domains (that is, more abstract knowledge structures than Fauconnier and Turner's 1994, 1998, 2002 mental spaces) is brought together in a common cognitive 'pool', the Blend.

Evaluation incorporates some search for related cross-input structure that could warrant successful metaphorical mappings. The literature has presented some computational models that aim to explain analogical reasoning. Some of those can also be applied to explain metaphorical thinking: Hoyoak and Thagard's (1989) Analogical Constraint Mapping Engine (ACME), for instance, constructs a constraint network to model the various pressures of similarity, context and isomorphism which shape the final interpretation. This network is the subject of a parallelized constraint relaxation process, from which a single interpretation emerges. ACME embodies a heuristic approach, so it may be called a natural or evolutionary model of computation, in which environmental forces pressurize a system into converging towards a 'good solution'⁷.

In case relational structure is found in the input domains, as Figure 2 shows, cross-domain mapping occurs. This process, in my view, is one of the most prototypical attributes of metaphor(isation). Mapping is unidirectional (from SOURCE to TARGET), and it normally ends in some output, which is occasionally a pragmatic implication like 'we should talk about our relationship' in the dead-end street example.

It should also be noted that if related structure is not found in the inputs, metaphorisation simply cannot take place. In this case a blend is established, which has a permanent life of its own. An illustration of such a construction could be a stock example, which is often treated (or referred to) in the literature as a metaphor: "*This surgeon is a butcher*" (Arzouan et al. 2007, Blasko & Connine 1993, Camp 2006, Forceville 2008, Gentner & Wolff 1997, Gernsbacher et al. 2001, Gibbs & Colston 2006, Gildea & Glucksberg 1983, Giora 2008, Glucksberg 2003, Glucksberg 2008, Glucksberg et al. 1982, Glucksberg et al. 2001, Kazmerski et al. 2003, Keysar 1989, Kintsch 2000, Kintsch 2008, Kintsch & Bowles 2002, Lakoff 2008, Mashal et al. 2007, Shen 1989, Sperber & Wilson 2008, Wolff & Gentner 1992, Wolff & Gentner 2000).

Within the metaphor tradition, "*This surgeon is a butcher*" could be interpreted on the basis of mappings from the source domain (BUTCHERY) to the target domain (SURGERY). Consider Table 2 below:

SOURCE : BUTCHER	MAPPINGS	TARGET: SURGEON
BUTCHER	→	SURGEON
CLEAVER	→	SCALPEL
ANIMAL CARCASSES	→	HUMAN PATIENTS
DISMEMBERING	→	OPERATING
ABATTOIR	→	OPERATING ROOM

Table 2: Cross-domain mappings for "*This surgeon is a butcher*"

As Table 2 indicates, the source domain contains a butcher, a cleaver and an animal's carcass that the butcher dismembers. In the target domain we have a surgeon, a scalpel and a live patient on whom the surgeon operates.

⁷ For more details on how ACME works and for a discussion of its advantages over other computational models that also explain metaphor, see Pálincás (2008).

However, as Kövecses (2005) argues, metaphor theory would run into a major difficulty in explaining the surgeon-as-butcher example: the metaphorical interpretation misses the main idea that the sentence is used to express, namely that the surgeon is incompetent. In other words, "... there is no natural correspondence between the two domains that would capture this meaning (the meaning of 'incompetence')" (Kövecses 2005: 268; the addition in parentheses is mine). That is, since butchery is a highly skilled profession where considerable expertise (knowledge of animal anatomy, cuts of meat) is involved, it would not be right to say that the butcher's incompetence corresponds to the surgeon's incompetence. Thus, "*This surgeon is a butcher*" should *not* be treated as a metaphor, since a related structure in the inputs through which the process of metaphorisation could take place (giving rise to the condemning implication) simply does not exist. Rather, what the comprehender experiences is a cognitive construction which 'gets stuck' at the level of blending. This idea is also explained by Lakoff's (1990) Invariance Principle, stating that metaphorical extensions presuppose consistent/compatible structure.⁸

Continuing the discussion of the complementary treatment of metaphor, it should be noted that Fauconnier and Turner rethought metaphor comprehension and argue that the "... analysis of metaphor requires analysis of elaborate integration networks producing what can seem like straightforward mappings between two domains taken as primitives" (2008: 61).

Keeping in mind both the tenets of the Lakoffian traditional metaphor theory, especially the principles of 'invariance' and one-way projection (see Section 2), and Fauconnier and Turner's (2008) conceptual view of metaphor, for the complementary analysis of the committee example consider Figure 3 below:

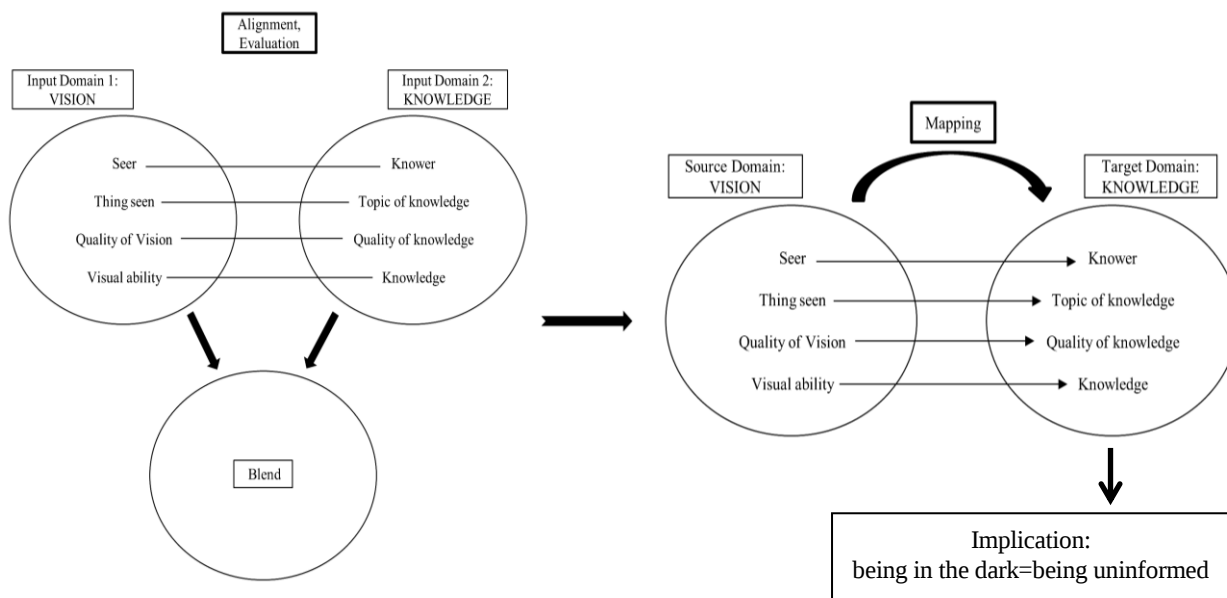


Figure 3: A schematic diagram of "*The committee has kept me in the dark about this matter*", analysed as a metaphor from a complementary (Lakoffian and blending) perspective

⁸ For discussion of the surgeon-as-butcher example as a blend, see Coulson & Oakley 2005, Coulson & Petten 2002, Gibbs 2003, Evans & Green 2006, Fauconnier & Turner 1998, Grady et al. 1999, Imaz & Benyon 2007, Oakley 1998, Slingerland 2008, and Turner 2001.

Also note that in Lakoff's (2008) view the blending approach is not appropriate to describe the surgeon-as-butcher example.

As is illustrated above, the representation of “*The committee has kept me in the dark about this matter*” in a complementary framework involves two phases: first, in the alignment stage, correspondences are identified between the inputs. The domains are weighed against each other and evaluated in a process in which the relevant conceptual metaphor, KNOWING IS SEEING (see Cacciari 1998, Coulson 2006a, 2006b, 2006c, Coulson & Oakley 2003, Gibbs 2005, Johnson 1999, Katz et al. 1998, Kövecses 2002, 2005, Lakoff 2007, Reich 2004 for discussion of this metaphor) picks out related elements in them. That is, in the Blend, particular components of knowledge structures which concern ‘vision’ are put into correspondence with specific elements relating to ‘intellectual activity’. Thus, the seer in the domain of VISION corresponds to the knower in the domain of KNOWLEDGE, the thing the experimenter sees to the topic, or in other words to the information that the intellectual agent knows. Furthermore, the quality of vision pairs with the quality of knowledge, and visual ability with the potential for the acquisition of some knowledge.

Second, once (at least some of) these relations between the two domains have been identified, cross-domain mapping occurs from source to target (as indicated by the rightward arrows). This process constitutes an essential prerequisite for metaphorisation, in which knowledge about ‘vision’ is actually used to talk about ‘intellectual activity’. That is, the physical and perceptual state of being kept in the dark is identified as being metaphorically identical to being kept uninformed/ignored.⁹

Now that a description of metaphor has been proposed, let us continue to provide an explanation for irony. Then, a comparative analysis of the two figures follows.

3 What is Irony?

The word ‘eironeía’ first appears in Plato’s Republic to describe Socrates’s treatment of his conversational opponents. Plato considered irony “a sort of vulgar expression and reproach ... [meaning] sly, mocking pretense and deception” (Knox 1961: 3). Socratic irony refers to a discourse strategy in which the speaker pretends that he is learning something from his interlocutor while trying to uncover the flaws in that person’s argument (Nilsen & Nilsen 2000).

In his Rhetoric, Aristotle uses irony both to praise and blame. Nonetheless, he also considered irony as a noble form of jesting, where the ironist amuses himself and not necessarily other participants. Most importantly, the idea that ‘an ironist means the opposite of what he says’ is attributed to Aristotle’s Rhetoric on Alexander (Barbe 1995).

In more contemporary linguistic theory, irony became a particular interest in the 1970s, especially with the rise of Paul Grice’s pragmatic linguistics. According to the Standard Pragmatic Model (Grice 1975, 1978), irony is understood in a two-step fashion: first, the literal meaning of an ironically intended utterance is processed. Then the hearer tests that

⁹ At this point the following observation should be made: in Section 2.2 the *blending* explanation of the committee example indicates that the Blend (and also the understanding process) incorporates the ‘darkness is ignorance’ metaphor. Therefore, if the position that the committee *metaphor* (Figure 3) presupposes an initial blending stage is taken, it would be logical to presume that the committee metaphor also contains the ‘darkness is ignorance’ construction in its (initial) blend. However, in my view, it does not. The reason for this could be that in the committee *metaphor* Input Domain 2 incorporates KNOWLEDGE, which has less to do with ‘ignorance’ as compared to the board (constituting Input Space 2) in the committee *blend* (see Figure 1). Therefore, the ‘darkness is ignorance’ metaphor seems to be a more in-Blend phenomenon in the committee *blend*, while more a matter of (in- or after-Blend) implication in the committee *metaphor*.

meaning against the context. Only when he realises that the literal meaning is against the rules of cooperative communication does he search for an underlying (figurative) interpretation.

The 1980s and 1990s have witnessed a number of attempts at defining irony within a single definition. Sperber and Wilson (1981), for instance, propose that an ironic utterance ‘echoes’ a previous thought or expectation (as in the “*This soup is delicious*”, in which the ironic speaker echoes his earlier desire that the soup should be tasty). In another theory, Clark and Gerrig (1984) suggest that an ironist is pretending to be an injudicious person speaking to an uninitiated, naïve audience. As an example, the ironic “*What beautiful weather we have today*” presupposes an imaginary weather forecaster. Finally, Kreuz and Glucksberg (1989) emphasize the ‘reminder’ function of ironic utterances and claim that verbal irony reminds addressees of what has been expected by alluding to that expectation.

Blending Theory (Fauconnier & Turner (1994, 1998, 2002)) has opened new ways of thinking about figurative language, resulting in models describing irony as a matter of conceptual integration. Those models appeared especially after the turn of the millennium.

One of the most well-known and established blending accounts of irony was proposed by Coulson (2005). In her model she argues that an ironic conceptual integration network constitutes an Expected Reaction Space, a Counterfactual Trigger Space and a Blended Space. In the Expected Reaction Space the hearer models an actual course of events. Since in most cases irony expresses some negative evaluation on the part of the speaker, the expected reaction is to get upset. The Counterfactual Trigger Space “typically applies to the way we wish the world had been” (Coulson 2005: 136). The Blended Space inherits structure from both of the other spaces mentioned.

For an illustration of Coulson’s model, consider the situation in which a driver says “*I love people who signal*” after being cut off in traffic. See Table 4 below:

<u>Expected Reaction</u>	<u>Blended Space</u>	<u>Counterfactual Trigger</u>
Cuts-off(A,B)	Cuts-off(A',B')	Switches-lanes(A'',B'')
C:~Signal(A,B)	C':~Signal(A',B')	C'':Signals(A'',B'')
Chastises(B,A,C)	Compliments(B',A',C)	Compliments(B'',A'',C'')

Table 3: Coulson’s analysis of “*I love people who signal*” as an ironic blend (reproduced with the permission of the author)

As indicated in the above table, the Expected Reaction Space contains information of a driver who is being cut off in traffic. As a reaction, he becomes furious and chastises the deviant driver. In contrast, the Counterfactual Trigger Space involves an ‘ideal’ situation, in which a driver first indicates before he would switch lanes, and then he is praised for performing all this in a proper way. The Blend incorporates information of a deviant driver who cuts off in traffic without signalling but, in spite of this, he is complimented for his (mis)behaviour. In Coulson’s model the ironist’s interlocutor should notice the discrepancy in the Blend and infer that the speaker is being ironic.

Although Coulson’s explanation of the deviant driver example is legitimate in the sense that conceptual integration is involved in the representation process, her model should be reconsidered in terms of the following observation: if the Expected Reaction Space is seen as what we would normally call ‘reality’ (actual course of events), in my view, ‘chastisement’ cannot be considered an inherent part of that space. Rather, resentment at the misbehaving driver emerges from blending the conceptual content which is evoked by the current flow of

events with the conceptual picture which is inspired by the speaker's words.¹⁰ Consider Figure 4 below:

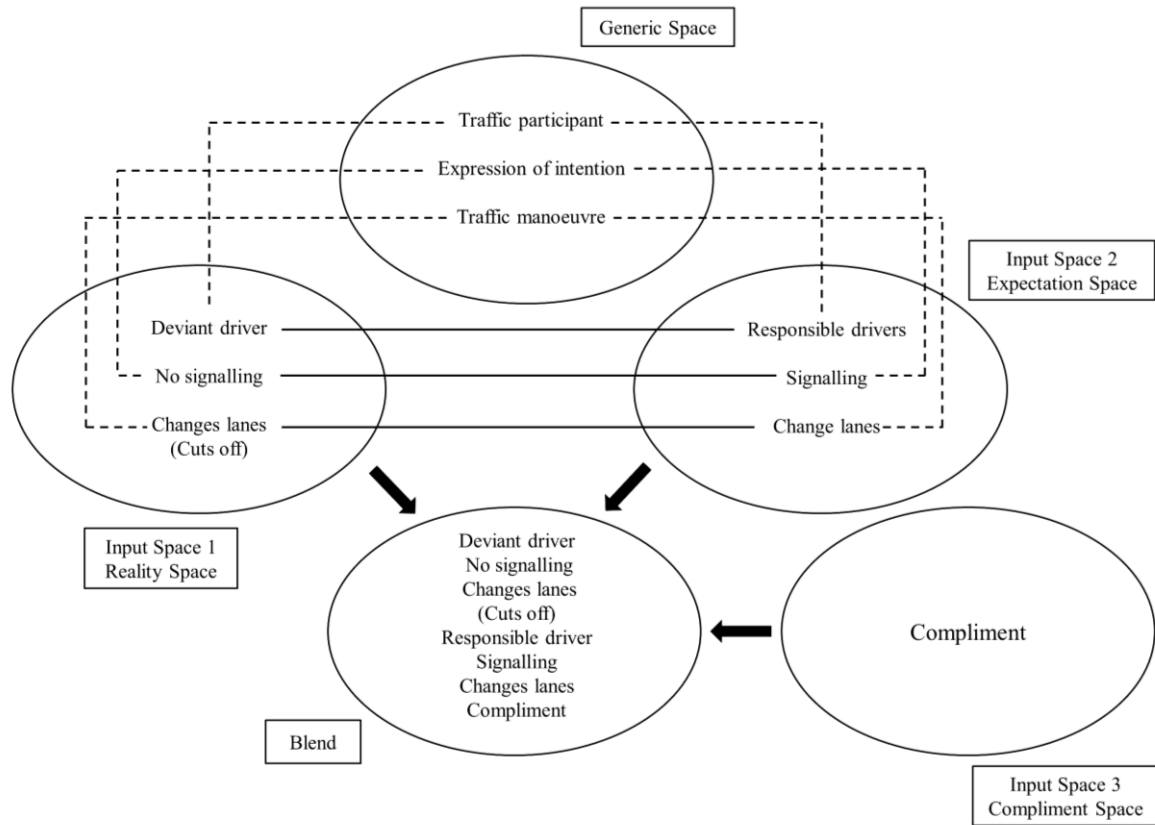


Figure 4: The conceptual integration network of the ironic “I love people who signal”

As is indicated in the above figure, the representation of the ironic “I love people who signal” involves three input spaces: the Reality Space incorporates information about the actual course of events, in which a deviant driver changes lanes without signalling. The Expectation Space shows how things are normally be expected to happen according to the accepted rules of the Highway Code, and social and behavioural standards: a responsible driver should indicate his intention of changing lanes. Finally, the Compliment Space contains knowledge about the generally and socially accepted norms of praise.¹¹

¹⁰ Note, however, that it is part of our folk psychology (world knowledge) that drivers who cut off without signalling are considered dangerous and that people are generally annoyed with those motorists. On this basis, ‘chastisement’ could already be part of what might be called the speaker’s and the hearer’s ‘reality’ or in another term ‘the(ir actual) perception and understanding of the world’. However, in my view, the speaker’s resentment against the errant driver becomes manifest (and overtly expressed) in the Blend, and it just builds (and reflects) upon the generally held folk psychology about deviant drivers. For further criticism of Coulson’s blending interpretation of irony, see Pálincás (2014).

¹¹ It should be mentioned that in Coulson’s (2005) analysis, ‘compliment’ as such is part of the Counterfactual Trigger Space (the construction that incorporates knowledge about how one expects the world to be/to have been). In my view, however, (the act of) *complimenting* (such) traffic manoeuvres does not generally constitute any particular social expectation. Therefore, in my analysis, I incorporate the Compliment Space as a *separate* mental construction.

The Generic Space shows abstract correspondences that exist between the inputs: both drivers could be considered as ‘traffic participants’, signalling and the lack of it as ‘expression of intention’, and changing lanes can be regarded as a ‘traffic manoeuvre’.

The Blend incorporates content from all the three input spaces. Thus, in it there is contradictory information: a co-presence of a deviant driver who cuts off without signalling *and* a responsible one who, in a law-abiding fashion, signals before he would change lanes. This latter motorist is then praised for his behaviour.

In this example, the real conflict comes from the fact that the deviant driver is pretended to be seen as a responsible one, who is then praised for his manoeuvre. In other words, although in reality the motorist did *not* signal, the speaker pretends that he did. The hearer notices this conflict, since he knows that the motorist is actually not law-abiding (but deviant). Therefore, the compliment is not justifiable in the real (actual) situation; quite the contrary, the implication arises that the speaker expresses irritation about the driver’s (mis)behaviour.

Now that an example of irony has been analysed in Blending Theory, let us compare metaphor and irony in terms of conceptual blends. Special emphasis will be placed on idiosyncratic and distinctive structural attributes at the cognitive level of organisation.

4 A Blending Comparison of the Committee and the Deviant Driver Examples

The Introduction already made mention of a number of similarities and differences that the literature had revealed between metaphor and irony. This section compares an example of the two forms with the ultimate aim of identifying further common and disparate features of those figures at the conceptual level of organisation. Thus, the representation of the committee metaphor (henceforth indicated as repC) and of the deviant driver irony (repD) differ in the following points: first, while repC involves mapping of conceptual structure from *two* mental constructions (source and target) into the Blend, repD involves the analysis of *three* inputs.

Second, while repC is concerned with ‘domains’, repD largely depends on ‘mental spaces’ – two basically different cognitive constructions: the domains in the committee metaphor incorporate more *entrenched* knowledge structures (about ‘vision’ and ‘intellectual activity’). On the other hand, the mental spaces in the deviant driver irony involve *transitory* conceptualisations (of reality and of a responsible driver). Thus, since repC might be grounded in bodily experience with the physical and cultural world (vision, light, knowledge) and involves well-established knowledge structures, it is a less motivated process as compared to repD, which involves no entrenched (but on-line) conceptualisations.

Third, the committee example, which is based upon the KNOWING IS SEEING conceptual metaphor, maps entities (for example, ‘seer’, ‘knower’, ‘thing seen’, ‘topic of knowledge’) and relationships into the Blend. In contrast, the deviant driver irony maps complex scenarios (reality, and the picture of a rule-abiding driver in its contextual setting).

Fourth, in the committee example the prominent counterparts from the inputs project to a *single* element in the Blend. Thus, in this space the person who has not been informed is linked to the individual in the dark in the source, and to the uninformed person in the target (cf. Grady et al. 1999).

By contrast, in the deviant driver irony counterpart elements project to *distinct* elements in the Blend. Thus, the misbehaving motorist and the rule-abiding driver are not fused in the blended space.

Fifth, in the committee metaphor it is only *one* of the inputs (the VISION Domain) whose cognitive topology underlies the comprehension process (see the discussion of the Invariance Principle in Section 2.1). That is, the metaphor is basically represented through the experience of having difficulty seeing what is around us in darkness.

In comparison, the Blend in the deviant driver irony incorporates organising frames (frames that specify "... the nature of the relevant activity, events, and participants." Fauconnier & Turner 1998: 163) from *both* inputs: one of those frames is structured by reality, and the other by the picture of a rule-abiding driver who changes lanes in a responsible fashion.

Sixth, although both repC and repD involve mapping to the blend, it is only repC that incorporates mapping from one input to the other.

Seventh, in repC only those elements are carried over to the target that are consistent with it. In repD, however, the Blend mostly contains contradictory elements.

Finally, let us consider the most important commonality that the blending analysis in this paper reveals between the cognitive organisation of the committee metaphor and the deviant driver irony: the representation of *both* examples incorporate conceptual integration processes, in which content from inputs is projected into the Blend.

5 A Blending Comparison of Metaphor and Irony

Drawing from the discussion in this paper, and especially from the comparison of the committee metaphor and the deviant driver irony, the following general observations could be made about the relation between metaphor and irony in terms of blending operations:

- while the representation of metaphor (repM) is concerned with domains, the representation of irony (repI) incorporates mental spaces – two basically different cognitive architectures
- repM generally involves two input mental constructions (source and target domains), repI allows more than two (mental spaces)
- as compared to repI, repM occasionally (especially in the case of conventional metaphors) incorporates well-established knowledge structures; thus, repM could be a less motivated process than repI
- metaphor maps entities and relationships, irony maps more complex content (on-line scenarios)
- metaphor maps prominent elements from the inputs to a single element in the blend – irony maps counterpart elements from the inputs to different entities in the blend
- only repM incorporates projection from one input to the other
- in repM only those elements are carried over to the target that are consistent with it – in repI, however, the blend most often contains contradictory elements
- both repM and repI incorporate conceptual integration

As is indicated above, although both metaphor and irony involve conceptual integration, there are fundamental differences in the way those figures are understood. Therefore, in line with a number of conceptions which differentiate metaphor and irony in terms of their representation (see the Introduction for discussion and references), this study also vindicates the claim that metaphor and irony are *not* understood by identical processing mechanisms.

References

- Arzouan, Y., Goldstein, A. & Faust, M. (2007): Brainwaves are stethoscopes: ERP correlates of novel metaphor comprehension. *Brain Research* 1160, 69-81.
- Barbe, K. (1995): *Irony in Context*. Amsterdam: John Benjamins.
- Beck, B. (1978): The metaphor as a mediator between semantic and analogic modes of thought. *Current Anthropology* 19, 83-94.
- Blasko, D. & Connine, C. (1993): Effects of familiarity and aptness on metaphor processing. *Journal of Experimental Psychology: Learning, Memory, and Cognition* 19.2, 295-308.
- Bottini, G., Corcoran, R., Sterzi, R., Paulesu, E., Schenone, P., Scarpa, P., Frackowiak, R. & Frith, C. (1994): The role of the right hemisphere in the interpretation of figurative aspects of language: A positron emission tomography activation study. *Brain* 117, 1241-1253.
- Brownell, H., Potter, H., Michelow, D. & Gardner, H. (1984): Sensitivity to lexical denotation and connotation in brain damaged patients: A double dissociation? *Brain & Language* 22, 253-265.
- Brownell, H. (1988): Appreciation of metaphoric and connotative word meaning by brain-damaged patients. In: Chiarello, C. (ed.): *Right Hemisphere Contributions to Lexical Semantics*. Heidelberg: Springer-Verlag, 19-31.
- Brownell, H. (2000): Right hemisphere contributions to understanding lexical connotation and metaphor. In: Grodzinsky, Y., Shapiro, L. & Swinney, D. (eds.): *Language and the Brain*. San Diego: Academic Press, 185-201.
- Burgess, C. & Simpson, G. (1988): Cerebral hemispheric mechanism in the retrieval of ambiguous word meanings. *Brain & Language* 33, 86-102.
- Cacciari, C. (1998): Why do we speak metaphorically? Reflections in thought and language. In: Katz, A., Cacciari, C., Gibbs, R. & Turner, M. (eds.): *Figurative Language and Thought*. New York: Oxford University Press, 119-157.
- Camp, E. (2006): Metaphor in the mind: The cognition of metaphor. *Philosophy Compass* 1.2, 154-170.
- Clark, H. & Gerrig, R. (1984): On the pretense theory of irony. *Journal of Experimental Psychology: General* 113, 121-126.
- Colston, H.L. & Gibbs, R.W. (2002): Are irony and metaphor understood differently? *Metaphor and Symbol* 17, 57-80.
- Coulson, S. (2001): *Semantic Leaps: Frame Shifting and Conceptual Blending in Meaning Construction*. New York & Cambridge: Cambridge University Press.
- Coulson, S. (2005): Sarcasm and the space structuring model. In: Coulson, S. & Lewandowska-Tomaszczyk, B. (eds.): *The Literal and the Nonliteral in Language and Thought*. Berlin: Peter Lang, 129-144.
- Coulson, S. (2006a): Metaphor and conceptual blending. In: Brown, K. (Editor-in-Chief): *Encyclopedia of Language and Linguistics*. (2nd edition). Oxford: Elsevier, 32-39.
- Coulson, S. (2006b): Constructing meaning. *Metaphor and Symbol* 21, 245-266.

- Coulson, S. (2006c): Conceptual blending in thought, rhetoric, and ideology. In: Kristiansen, G. & Dirven, R. (eds.): *Cognitive Linguistics: Current Applications and Future Perspectives*. Amsterdam: John Benjamins, 187-210.
- Coulson, S. & Matlock, T. (2001): Metaphor and the space structuring model. *Metaphor and Symbol* 16.3, 295-316.
- Coulson, S. & Oakley, T. (2003): Metonymy and Conceptual Blending. In: Panther, K-U. & Thornburg, L. (eds.): *Metonymy and Pragmatic Inferencing*. Amsterdam: John Benjamins, 51-79.
- Coulson, S. & Oakley, T. (2005): Blending and coded meaning: Literal and figurative meaning in cognitive semantics. *Journal of Pragmatics* 37, 1510-1536.
- Coulson, S. & Van Petten, C. (2002): Conceptual integration and metaphor: An event-related potential study. *Memory and Cognition* 30, 958-968.
- Evans, V. & Green, M. (2006): *Cognitive Linguistics: An Introduction*. Edinburgh: Edinburgh University Press.
- Eviatar, Z. & Just, M. (2006): Brain correlates of discourse processing: An fMRI investigation of irony and metaphor processing. *Neuropsychologia* 44.12, 2348-2359.
- Fauconnier, G. & Turner, M. (1994): *Conceptual projection and middle spaces*. San Diego: UCSD Cognitive Science Technical Report 9401.
- Fauconnier, G. & Turner, M. (1998): Conceptual integration networks. *Cognitive Science* 22.2, 133-187.
- Fauconnier, G. & Turner, M. (2002): *The Way We Think: Conceptual Blending and the Mind's Hidden Complexities*. New York: Basic Books.
- Fauconnier, G. & Turner, M. (2008): Rethinking metaphor. In: Gibbs, R. (ed.): *The Cambridge Handbook of Metaphor and Thought*. New York: Cambridge University Press, 53-66.
- Forceville, C. (2008): Metaphor in pictures and multimodal representations. In: Gibbs, R. (ed.): *The Cambridge Handbook of Metaphor and Thought*. New York: Cambridge University Press, 462-482.
- Frith, U. & Frith, C. (2003): Development and neurophysiology of mentalizing. *Philosophical Transactions of the Royal Society: Biological Sciences* 358, 459-473.
- Gentner, D. & Wolff, P. (1997): Alignment in the processing of metaphor. *Journal of Memory and Language* 37, 331-355.
- Gernsbacher, M.A., Keysar, B., Robertson, R. & Werner, N. (2001): The role of suppression and enhancement in understanding metaphors. *Journal of Memory and Language* 45, 433-450.
- Gibbs, R. (2003): Nonliteral speech acts in text and discourse. In: Graesser, A., Gernsbacher, M. & Goldman, S. (eds.): *Handbook of Discourse Processes*. Mahwah, NJ: Erlbaum, 357-393.

- Gibbs, R. (2005): Embodiment in metaphorical imagination. In: Pecher, D. & Zwaan, R. (eds.): *Grounding Cognition: The Role of Perception and Action in Memory, Language and Thinking*. New York: Cambridge University Press, 65-92.
- Gibbs, R. & Colston, H. (2006): Figurative language. In: Traxler, M. & Gernsbacher, M. (eds.): *Handbook of Psycholinguistics*. London: Elsevier, 835-861.
- Gibbs, R. & O'Brien, J. (1991): Psychological aspects of irony understanding. *Journal of Pragmatics* 16, 523-530.
- Gildea, P. & Glucksberg, S. (1983): On understanding metaphor: The role of context. *Journal of Verbal Learning and Verbal Behavior* 22, 577-590.
- Giora, R. (2008): Is metaphor unique? In: Gibbs, R. (ed.): *The Cambridge Handbook of Metaphor and Thought*. New York: Cambridge University Press, 143-160.
- Giora, R., Zaidel, E., Soroker, N., Batori, G. & Kasher, A. (2000): Differential effects of right- and left-hemisphere damage on understanding sarcasm and metaphor. *Metaphor and Symbol* 15.1&2, 63-83.
- Glucksberg, S. (2003): The psycholinguistics of metaphor. *TRENDS in Cognitive Sciences* 7.2, 92-96.
- Glucksberg, S. (2008): How metaphors create categories – quickly. In: Gibbs, R. (ed.): *The Cambridge Handbook of Metaphor and Thought*. New York: Cambridge University Press, 67-83.
- Glucksberg, S., Gildea, P. & Bookin, H. (1982): On understanding nonliteral speech: Can people ignore metaphors? *Journal of Verbal Learning and Verbal Behavior* 21.1, 85-98.
- Glucksberg, S., Newsome, M. & Goldvarg, Y. (2001): Inhibition of the literal: Filtering metaphor-irrelevant information during metaphor comprehension. *Metaphor and Symbol* 16.3&4, 277-293.
- Grady, J., Oakley, T. & Coulson, S. (1999): Conceptual blending and metaphor. In: Gibbs, R. (Ed.): *Metaphor in Cognitive Linguistics*. Amsterdam: John Benjamins, 420-440.
- Grice, P. (1975): Logic and conversation. In: Cole, P. & Morgan, J. (eds.): *Syntax and Semantics: Speech Acts* (Vol. 3). New York: Academic Press, 41-58.
- Grice, P. (1978): Further notes on logic and conversation. In: Cole, P. (ed.): *Syntax and Semantics: Pragmatics* (Vol. 9). New York: Academic Press, 113-128.
- Griffin, R., Friedman, O., Ween, J., Winner, E., Happé, F. & Brownell, H. (2006): Theory of mind and the right cerebral hemisphere: Refining the scope of impairment. *Laterality* 11.3, 195-225.
- Happé, F. (1993): Communicative competence and theory of mind in autism: A test of relevance theory. *Cognition* 48.2, 101-119.
- Holyoak, K. & Thagard, P. (1989): Analogical mapping by constraint satisfaction. *Cognitive Science* 13, 295-355.
- Imaz, M. & Benyon, D. (2007): *Designing with Blends*. MIT Press.

- Janicki, K. (2006): *Language Misconceived: Arguing for Applied Cognitive Sociolinguistics*. New Jersey: Lawrence Erlbaum Associates.
- Johnson, C. (1999): Metaphor vs. conflation in the acquisition of polysemy: The case of SEE. In: Hiraga, M., Sinha, C. & Wilcox, S. (eds.): *Cultural, Typological and Psychological Perspectives in Cognitive Linguistics*. Amsterdam: John Benjamins, 155-169.
- Katz, A. (2005): Discourse and social-cultural factors in understanding nonliteral language. In: Colston, H. & Katz, A. (eds.): *Figurative Language Comprehension: Social and Cultural Influences*. Mahwah, NJ: Erlbaum and Associates, 183-207.
- Katz, A., Turner, M., Gibbs, R. & Cacciari, C. (1998): Counterpoint commentary. In: Katz, A., Cacciari, C., Gibbs, R. & Turner, M. (eds.): *Figurative Language and Thought*. New York: Oxford University Press, 158-192.
- Kazmerski, V., Blasko, D. & Dessalegn, B. (2003): ERP and behavioral evidence of individual differences in metaphor comprehension. *Memory and Cognition* 31.5, 673-689.
- Keysar, B. (1989): On the functional equivalence of literal and metaphorical interpretations. *Journal of Memory and Language* 28, 375-385.
- Kintsch, W. (2000): Metaphor comprehension: A computational theory. *Psychonomic Bulletin & Review* 7, 257-266.
- Kintsch, W. (2008): How the mind computes the meaning of metaphor. In: Gibbs, R. (ed.): *The Cambridge Handbook of Metaphor and Thought*. New York: Cambridge University Press, 129-142.
- Kintsch, W. & Bowles, A. (2002): Metaphor comprehension: What makes a metaphor difficult to understand? *Metaphor and Symbol* 17.4, 249-262.
- Knox, N. (1961): *The Word Irony and Its Context, 1500-1755*. Durham, NC: Duke University Press.
- Kövecses, Z. (2002): *Metaphor: A Practical Introduction*. New York: Oxford University Press.
- Kövecses, Z. (2005): *Metaphor in Culture: Universality and Variation*. New York: Cambridge University Press.
- Kreuz, R. J. & Caucci, G. M. (2009): Social aspects of verbal irony use. In: Pishwa, H. (ed.): *Language and Social Cognition*. Berlin: Mouton de Gruyter, 325-345.
- Kreuz, R. J. & Glucksberg, S. (1989): How to be sarcastic: The echoic reminder theory of verbal irony. *Journal of Experimental Psychology: General* 118, 374-386.
- Kreuz, R. J., Kassler, M. A., Coppenrath, L. & McLain Allen, B. (1999): Tag questions and common ground effects in the perception of verbal irony. *Journal of Pragmatics* 31, 1685-1700.
- Lakoff, G. (1990): The Invariance Hypothesis: Is abstract reason based on images schemas? *Cognitive Linguistics* 1.1, 39-74.
- Lakoff, G. (2007): The contemporary theory of metaphor. In: Evans, V., Bergen, B. & Zinken, J. (eds.): *The Cognitive Linguistics Reader*. Equinox Publishing Ltd, 267-315.

- Lakoff, G. (2008): The neural theory of metaphor. In: Gibbs, R. (ed.): *The Cambridge Handbook of Metaphor and Thought*. New York: Cambridge University Press, 17-38.
- Lakoff, G. & Johnson, M. (1980): *Metaphors We Live By*. Chicago: University of Chicago Press.
- Marks, L. (1982): Bright sneezes and dark coughs, loud sunlight and soft moonlight. *Journal of Experimental Psychology: Human Perception and Performance* 8.2, 177-193.
- Mashal, N., Faust, M., Hendler, T. & Jung-Beeman, M. (2007): An fMRI investigation of the neural correlates underlying the processing of novel metaphoric expressions. *Brain & Language* 100.2, 115-126.
- Nilsen, A. & Nilsen, D. (2000): *Encyclopedia of Humor and Comedy*. Westport, CT: Greenwood Press.
- Oakley, T. (1998): Conceptual blending, narrative discourse, and rhetoric. *Cognitive Linguistics* 9.4, 321-360.
- Pálincás, I. (2008): The 'pragmatic' blend. *Argumentum* 4, 204-213.
- Pálincás, I. (2014): Blending and folk theory in an explanation of irony. *Review of Cognitive Linguistics* 12.1, 64-98.
- Pelyvás, P. (2002): The development of modal meanings in English: Metaphorical extension or conceptual blending? In: Vadon, L. (ed.): *HUSSE Papers 2001. Proceedings of the Fifth Biennial Conference*. Eger: IEAS, Eszterházy Károly College, 459-475.
- Pynte, J., Besson, M., Robinchon, F. & Poli, J. (1996): The time-course of metaphor comprehension: an event-related potential study. *Brain & Language* 55, 293-316.
- Rapp, A., Mutschler, D., Wild, B., Erb, M., Lengsfeld, I., Saur, R., et al. (2010): Neural correlates of irony comprehension: The role of schizotypal personality traits. *Brain & Language* 113.1, 1-12.
- Regel, S., Coulson, S. & Gunter, T. (2010): The communicative style of a speaker can affect language comprehension? ERP evidence from the comprehension of irony. *Brain Research* 1311, 121-135.
- Reich, H. (2002): *Developing the Horizons of the Mind: Relational and Contextual Reasoning and the Resolution of Cognitive Conflict*. Cambridge, England: Cambridge University Press.
- Shen, Y. (1989): Symmetric and asymmetric comparisons. *Poetics* 18.6, 517-536.
- Shamay-Tsoory, S. & Aharon-Peretz, J. (2007): Dissociable prefrontal networks for cognitive and affective theory of mind: A lesion study. *Neuropsychologia* 45.13, 3054-3067.
- Slingerland, E. (2008): *What Science Offers the Humanities: Integrating Body and Culture*. New York: Cambridge University Press.
- Sperber, D. & Wilson, D. (1981): Irony and the use-mention distinction. In: Cole, P. (ed.): *Radical Pragmatics*. New York: Academic Press, 295-318.

- Sperber, D. & Wilson, D. (2008): A deflationary account of metaphors. In: Gibbs, R. (ed.): *The Cambridge Handbook of Metaphor and Thought*. New York: Cambridge University Press, 84-105.
- Turner, M. (2001): *Cognitive Dimensions of Social Science*. New York: Oxford University Press.
- Uchiyama, H., Seki, A., Kageyama, H., Saito, D., Koeda, T., Ohno, K., et al. (2006): Neural substrates of sarcasm: A functional magnetic-resonance imaging study. *Brain Research* 1124.1, 100-110.
- Van Lancker, D. & Kempler, D. (1993): Acquisition and loss of familiar language: Idiom and proverb comprehension. In: Eckman, F. (ed.): *Confluence: Linguistics, L2 Acquisition and Speech Pathology*. Amsterdam: John Benjamins, 249-257.
- Vitacco, D., Brandeis, D., Pascual-Marqui, R. & Martin, E. (2002): Correspondence of event-related potential tomography and functional magnetic resonance imaging during language processing. *Human Brain Mapping* 17.1, 4-12.
- Wang, T., Lee, S., Sigman, M. & Dapretto, M. (2006): Neural basis of irony comprehension in children with autism: The role of prosody and context. *Brain* 129, 932-943.
- Winner, E., (1988): *The Point of Words: Children's Understanding of Metaphor and Irony*. Cambridge, MA: Harvard University Press.
- Winner, E. & Gardner, H. (1993): Metaphor and irony: Two levels of understanding. In: Ortony, A. (ed.): *Metaphor and Thought*. (2nd edition). Cambridge: Cambridge University Press, 425-443.
- Wolff, P. & Gentner, D. (1992): The time course of metaphor comprehension. *Proceedings of the Fourteenth Annual Conference of the Cognitive Science Society*. Hillsdale, NJ: Erlbaum, 504-509.
- Wolff, P. & Gentner, D. (2000): Evidence for role-neutral initial processing of metaphors. *Journal of Experimental Psychology: Learning, Memory, and Cognition* 26.2, 529-541.
- Zaidel, E., Kasher, A., Soroker, N. & Batori, G. (2002): Effects of right and left hemisphere damage on performance of the "Right Hemisphere Communication Battery". *Brain & Language* 80.3, 510-535.