The theses of the doctoral dissertation

Explanation and Contrast of Metaphor and Irony in a Conceptual Integration Framework

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I. Objectives of the dissertation

Metaphor and irony are quite frequent objects of scientific investigation. Researchers from a variety of disciplines attempt to explicate different aspects of these phenomena, sometimes with the purpose of identifying commonalities and/or differences between them. As an example, 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. This process relies on the hearer’s ability to attribute beliefs and intentions to the enunciator in order to explain or predict his behaviour (Frith and Frith 2003).

On the other hand, Colston and Gibbs (2002) claim that irony is understood differently than metaphor, since understanding irony (but not metaphor) needs meta-representational reasoning on the part of the comprehender.

Although metaphor and irony have been compared on several grounds, they have not been aligned in terms of possible similarities and differences in their processing mechanisms. Therefore, in the dissertation, I treat metaphor and irony as ‘modes of thought’, and I systematically compare and contrast their representations at the conceptual level of analysis.

For a systematic comparison of metaphor and irony, it is necessary to reveal and understand their cognitive attributes. As I show in Chapter 3, earlier models of metaphorical representation are theoretically and empirically useful, since they offer relatively specific explanations, against which actual thinkers’ intuitions about particular cases can be tested. However, precisely because metaphor potentially involves the most creative aspects of human imagination and cognition, they are unlikely to replicate the full range of our intuitive responses to metaphors. Furthermore, earlier models do not make explicit claims about how metaphor is actually processed.

Although to describe the leaps of imagination in an algorithmic manner is not easy, cognitive linguistics has the potential to offer idiosyncratic features of metaphorical representation, and to explicate the mental processes which are presumed to be at work when understanding metaphor. Therefore, I propose a description of this mode of thought which incorporates elements from both the Lakoffian model of metaphor (Lakoff and Johnson 1980), and Blending Theory (Fauconnier and Turner 1994, 1998, 2002).

As Chapter 6 shows, in contrast to what their authors claim, the most powerful theories of verbal irony from the ‘80s and ‘90s fail as all-encompassing, fully-fledged conceptions, since they have difficulty explaining less well-fitting examples of irony. This raises the question of
whether defining irony within the strict confines of an academic definition is necessary or, indeed, even possible. I believe that an analysis of the *processing sequence* of ironic utterances may be better worth the effort and would yield novel and deeper insights into the very nature of irony.

In the chapter I also outline and analyse the most significant mental space- and blending theories of irony (e.g., Coulson 2005; Kihara 2005). Those models have contributed to the academic discussion of this phenomenon by opening a new perspective: irony can be explained as a ‘mode of thought’ in which conceptual integration plays an integral part. Since the blend-based frameworks which are explained in this chapter run into difficulties of different kinds, I propose an alternative blending model in Chapter 7.

Finally, from the early 2000s, the processing of metaphor and irony has gradually become the focus of neuroscientific investigation. A growing number of empirical studies explain what neurocognitive processes are at work in the representation of those modes of thought. These measures primarily deal with ‘event-related potential’ (ERP) signals. An ERP can be defined as a measured brain response which is the direct result of a specific cognitive, sensory or motor event. Cognitive neuroscientists generally use ERPs to characterise the brain activity related to stages of information processing in humans. Most neurocognitive investigations of metaphor and irony focus on a particular ERP component, the so-called N400, which is a negative deflection, peaking approximately 400 ms after stimulus presentation. Most often, in such experiments subjects are involved in decision-making tasks based on linguistic stimuli which are presented to them on a computer screen (cf. Arzouan et al. 2007).

The N400 is thought of as a general index of the ease and difficulty of retrieving stored conceptual knowledge associated with a word (cf. Kutas and Federmeier 2000). The difficulty of retrieval depends on the stored representation itself (for example, word class and frequency) and on retrieval cues provided by discourse context (Kutas et al. 2006).

In Chapter 9 I investigate if the theoretical predictions underlying the model of metaphor and the treatment of irony proposed in the dissertation can possibly be related to findings in neurosciences. Empirical data from psychological experiments are also connected to the assumptions which are made about the metaphor–irony distinction in Chapter 8. Besides examining if, at least at the level of possibility, the blending distinction of metaphor and irony can be related to neuroscientific and psychological findings, the interdisciplinary analysis in Chapter 9 might also help to better understand the two modes of thought in terms of the processing mechanisms which are associated with them in a semantic account.
II. Research methods

In the dissertation I propose an alternative hybrid model of metaphor which incorporates elements from both the Lakoffian description of metaphor (Lakoff and Johnson 1980), and Blending Theory (Fauconnier and Turner 1994, 1998, 2002). The analyses in this complementary framework explain the mental space\(^1\) structures of the metaphoric examples. This method helps to understand how cross-domain projections and conceptual integration (blending) play significant roles in the development of metaphorical meaning and emergent structure; that is, how metaphor works at the cognitive levels of organisation.

In order to test how the hybrid model works, two empirical researches were conducted. The aim of the studies was to test if the examples which the dissertation regarded as metaphorical were understood figuratively by ordinary language users\(^2\). If yes, the examples meet an important criterion of the proposed working definition of metaphor: the blend based, alternative representational model of metaphor, which the dissertation offers, is a means of figurative meaning construction.

In Experiment 1, I asked the participants to paraphrase expressions which were presented to them in a conversational setting. In Experiment 2, the subjects were instructed to write stories using the expressions which were already used in Experiment 1. In both studies I made inferences from the answers that the participants provided as to the way(s) the items might have been processed, and tested the hybrid model of metaphor on some examples which were considered metaphorical in both experiments.

To construct a model of irony which has not been documented in the literature I consider Blending Theory (Fauconnier and Turner 1994, 1998, 2002) as the basic theoretical framework. The analyses of ironic manifestations scrutinise the mental space structures of those examples and explain how conceptual integration contributes to the development of emergent ironic implications.

In order to test how the proposed model of irony works, an empirical research was conducted to collect examples which ordinary language users found ironic. In the study, I asked the participants to decide whether they thought particular linguistic items were ironic or not. The blend-based model of irony was then tested using some examples which (most) experimental subjects found manifestations of irony.

\(^1\) According to Fauconnier ([1985] 1994), mental spaces are temporary conceptual packages, which are interconnected in working memory, and can be modified dynamically as thought and discourse unfold.

\(^2\) The term ‘ordinary language user’ (lay speaker) is employed simply to contrast the experimental subjects to professional and academic linguists.
I compared and contrasted the blend-based frameworks which the dissertation proposes to explain the representations of metaphor and irony. The method which I used in the comparison is systematic: it incorporates the alignment of the attributes regarding both the construction and operation of the two processing models.

On a possibilistic (theoretical) basis I relate data from the blend-based cognitive semantic explanations of metaphor and irony which are proposed in this dissertation to results from neurological, psychological and psycholinguistic investigations of these modes of thought. That is, considering the structures of the blend-based models of metaphor and irony, I identify findings in neurosciences, psychology and psycholinguistics which might be related to those processing frameworks.

III. Research findings

A complementary model of metaphor

In the dissertation I construct an alternative, hybrid (complementary) model of metaphor which has not been documented in the literature. This account considers metaphor a mode of thought, and presumes that the understanding of metaphor incorporates two fundamental stages: the initial blending phase amounts essentially to collecting and marshalling information about conceptual packages. This incorporates alignment and evaluation of cognitive content. If sufficient similarity is found, then, in the second phase, projection takes place from one domain of experience (the source) to another (the target). That is, the metaphor runs a full course. Mapping is unidirectional (from source to target), and only those aspects of the source are carried over to the target that are consistent with it. This whole process normally ends in an emergent structure and figurative meaning. For an illustration of the model, consider figure 1 below:

![Diagram of a complementary model of metaphor](image)

Figure 1. The schematic representation of a complementary view of metaphor
The model is unique and different from previous (processing) approaches since, although it incorporates ‘conceptual blending’, which is an attribute of some earlier conceptions (e.g., Fauconnier and Turner 1994, 1998, 2002) of representation, in its terminology and structure it remains consistent with the traditional Lakoffian description of metaphor (Lakoff and Johnson 1980).

Although I do not intended to provide an established scholarly definition of metaphor, I propose a working definition, which builds upon the processing model that the dissertation develops. Based on that description, linguistic examples were tested in two experiments to see if they were understood figuratively by ordinary language users. The subjects understood the items which met the criteria of the working definition of metaphor in a figurative sense. Two of them were analysed (as modes of thought) in the hybrid model in Chapter 5, and another one in Chapter 8. For an illustration of the alternative hybrid model of metaphor, consider the following example:

(1) Éva and Balázs have been going out for years. One day, however, after a bit of an argument Éva says to Balázs:

Éva: Balázs, I feel that our relationship has hit a dead-end street.

As is illustrated in Figure 2, the representation of “Our relationship has hit a dead-end street” in a complementary framework involves two phases: first, in the alignment stage, correspondences are identified between the inputs.

![Figure 2. A schematic diagram of “Our relationship has hit a dead-end street”, analysed as a metaphor from a complementary perspective](image-url)
The domains are weighed against each other and evaluated in a process in which the relevant conceptual metaphor, LOVE IS A JOURNEY\(^3\) picks out related elements in them. That is, in the Blend, particular components of knowledge structures which concern LOVE are put into correspondence with specific elements relating to JOURNEY. Thus, for example, the ‘travellers’ in the domain of JOURNEY correspond to the ‘lovers’ in the domain of LOVE, the ‘vehicle’ used for the journey to the ‘love relationship’ (see Figure 2 above).

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 in Figure 2). This process constitutes an essential prerequisite for metaphorisation, in which knowledge about JOURNEY is actually used to talk about LOVE. That is, the physical and perceptual state of one’s finally ending up in a dead-end street is identified as being metaphorically identical to his finding himself in a problematic relationship.

**A blending model of irony**

As I see it, irony is a versatile phenomenon which is difficult to grasp in a single scholarly definition. Rather, irony is better explained within Wittgenstein’s (1953) theory of ‘family resemblances’. According to this approach, members of a family can be similar despite the fact that there is no single attribute which is present in all of them. In a similar fashion, although several games are similar in one way or another, it would be hard to tell what is common in, for example, noughts and crosses, chess, tennis and board games. If there are no mutual attributes in games despite the apparent similarities, it would be a daring (and perhaps risky) enterprise to try to define ‘game’ in general terms. It is more probable that the discrete (idiosyncratic) features of the individual/different types of games altogether constitute the category (in this case the ‘family’ and the concept of ‘game’).

The dissertation adopts the same logic in its discussion of irony. As the discussion in Chapter 6 indicates, although the different theories of irony explain some aspects of this phenomenon, irony has not been defined in a fully justifiable definition. This might be so because this phenomenon simply cannot be grounded in a single scholarly account and, besides constituting a family of resembling phenomena, it should be treated as a ‘folk theory’. This essentially means that for lack of a systematic cultural, conceptual or psychological model of irony, particular figurative statements are tagged ‘irony’ across a range of individuals with

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\(^3\) For discussion/mention of this metaphor, see Gentner et al. (2001); Gibbs (1998); Imaz and Benyon (2007); Kövecses (2002, 2004, 2005); Lakoff (1993, 2008); Lakoff and Johnson (1980); Shen (2002); Tendahl (2009).
common socio-cultural experience. That is, since irony is not a coherent concept, their manifestations constitute a family of resembling phenomena.

Although irony may not be grasped in a well-established explanation, I see examples of irony as members of a group which are related by particular similarity markers (for example, by blending), and I provide a working definition, which essentially corresponds to the blend-based processing model of irony: irony is a mode of thought whose representation involves the projection of incongruent conceptual content from discrepant input mental constructions into a common integrating space, the blend. Resolving this contradiction gives rise to emergent implications, which can be of various types. Most often these inferences reflect the enunciator’s negative evaluation. Consider figure 3 below:

![Blend-based model of irony](image)

Figure 3. The schematic representation of the blend based model of irony

In order to test if the proposed model of irony works, I conducted an experiment. In it examples which ordinary language users found ironic were collected. The blend-based model of irony was then tested using some examples which (most) experimental subjects found manifestations of irony. The analyses show that the proposed blend-based irony model successfully explains linguistic items which were considered ironic by (the majority of) the participants in the experiment.

As an illustration of the blending model of irony, consider the following example:
A married couple, Adél and Norbert, are planning a short trip for the weekend. On the morning of the planned trip, however, the weather is stormy. Adél walks to the window, looks through it and says:

**Adél:** *What beautiful weather we have today.*

As Figure 4 above indicates, the representation of the wife’s remark could be interpreted in terms of a blend of two contradictory input mental spaces. These constructions can be distinguished in relation to physical weather conditions and their evaluation: while the Reality Space contains information about storms, the Irreality Space includes knowledge about beautiful weather (like, for example, sunshine and warmth).

The folk models to evaluate those two types of weather are also different: while stormy weather is generally considered awful, most people would probably agree that sunny and warm weather is nice and beautiful.

The Generic Space contains information that is common to both the Stormy Weather Space and the Beautiful Weather Space. Hence, the abstract correspondences that exist between those spaces are ‘weather condition’ and ‘evaluation’.

The Blend inherits structure from both inputs: stormy weather from Input Space 1, and the positive evaluation from Input Space 2. As a result, there would be a clash between our folk
knowledge of bad weather with its negative evaluation and the positive assessment. This contradiction in the Blend gives rise to the ironic effect as emergent meaning

A comparison of metaphor and irony in a blending framework

The blend-based frameworks which the dissertation proposes to explain the representations of metaphor and irony are compared and contrasted. The method which is used in the comparison is systematic: it incorporates the alignment of the attributes regarding both the construction and operation of the two processing models.

According to the systematic comparison of the two blend-based frameworks, the following general observations can be made:

- While the representation of metaphor (repM) is concerned with domains, the representation of irony (repI) incorporates mental spaces – two different cognitive architectures.
- RepM originally involves two input mental constructions (source and target domains) in the blending phase, repI allows more than two (mental spaces).
- 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 the systematic comparison of the blend-based processing models of the two modes of thought indicates, although both metaphor and irony involve conceptual integration, there are fundamental differences in the way they are understood. Therefore, in line with a number of conceptions which differentiate metaphor and irony in terms of their representation (see, for example, Eviatar and Just 2006), I also vindicate the claim that metaphor and irony are not understood by identical processing mechanisms.
A blending comparison of irony and joke

Blending Theory (Fauconnier and Turner 1994, 1998, 2002) is a framework which can be used to compare and contrast not only metaphor and irony but also the reanalysis type of joke and non-reassessment examples of irony. Consider the following example:

(3) “Is the doctor at home?” the patient asked in his bronchial whisper. “No,” the doctor’s young and pretty wife whispered in reply. “Come right in.”

The above example is a reanalysis type of joke, since in order to make sense of it, the comprehender must backtrack and re-evaluate the text at some point in the interpretation. Thus, the patient ‘becomes’ a lover, the doctor’s wife ‘turns into’ an adulteress, and so on. Consider Figure 5 below:

Figure 5. A schematic diagram of the mental space structure of the doctor joke
As is indicated in Figure 5, the input mental spaces in this example are the Doctor Space and the Lover Space. The Blend is mostly structured by information coming from the Doctor Space. The punchline of the joke (“Come right in”), however, induces selective projection from two inputs: while ‘patient’ is imported from the Doctor Space, ‘invitation to enter’ comes from the Lover Space, whose activation is justified by the information that the wife is young and pretty and also by the fact that she is whispering. Thus, the content that ‘the patient is asked to enter’ leads to a conflict at the conceptualisation of the Doctor Space, initiates the Blend, and, at the same time, activates the Lover Space, which contains the following information: a lover visits his mistress and in an intimate (secretive) whisper enquires whether her husband is at home. The wife replies “No”, and invites her lover to enter the house.

Note that the activation of the Lover Space does not in itself give rise to the humorous effect. The comprehension of this joke also involves the systematic comparison of the two inputs. During this process, counterpart mapping identifies a number of connecting links between the Doctor Space and the Lover Space. Thus, as illustrated in Figure 5, the ‘patient’ pairs with the ‘lover’, the ‘doctor’s wife’ with the ‘adulteress’, the ‘bronchial whisper’ with the ‘non-medical (intimate) whisper’, and so on. (These matches are also present on an abstract level, as shown in the Generic Space.) Finally, and most importantly, in order to make sense of the joke, the comprehender must backtrack and re-evaluate the text in accordance with the identified interspace connections. During this process, the patient ‘becomes’ a lover, the doctor’s wife ‘turns into’ an adulteress, and so on. Reassessment, which is indicated by the rightward arrow in Figure 5, is crucial and will gradually put the Lover Space in the focus of the comprehender’s attention.

Non-reassessment manifestations of irony are those whose representation does not require any re-evaluation in order to make sense. As an illustration, consider example (2).

In the dissertation I align the mental space structures of both the reanalysis type of joke (RtJ) and non-reassessment examples of irony (NrtI), and reveal the following differences: in NrtIs it is the conflicting blend that gives rise to an ironic implication. In RtJs, however, the incongruous blend is only a trigger to a process in which one input space is re-analysed in terms of the correspondences found between it and the other space. In other words, in NrtIs, selective projection (of incongruous elements from the inputs) produces a conflicting blend, and the emergent implication is the result of that incongruity. In RtJs, however, the humorous effect

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4 Note that the woman in the Lover Space is also the doctor’s wife. However, in a functional sense, she is the lover’s mistress there – hence the label ‘adulteress’ (and not ‘doctor’s wife’).
emerges in the process of finding correspondences in the inputs and, most importantly, in the re-analysis of one of those spaces in terms of those links.

In all, the dissertation shows that conceptual integration can be applied to distinguish the reanalysis type of joke from non-reassessment examples of irony. Furthermore, the blend-based examination of the doctor joke shows that not only metaphor and irony but also joke can be considered as a mode of thought. This idea may be seen as a new orientation in the future investigation of humour.

**Possible neurolinguistic and psychological correlations of the blending models of metaphor and irony**

In the dissertation I demonstrate that the semantic notion of ‘conceptual blending’ can help to place the study of schizophrenic irony and metaphor in a neurolinguistic context. It has been shown that on a possibilistic basis conceptual integration might be related to some assertions made in neurological and psychological discussions of both metaphor and irony.

The dissertation’s neurolinguistic analyses of how schizophrenia patients represent metaphor and irony have three significant implications. First, in contrast to some presumptions found in the (cognitive-semiotic) literature (e.g., Brandt and Brandt 2005), the dissertation presumes that those suffering from schizophrenia might use blending as a cognitive operation in their processing of metaphor. Second, similar to schizophrenic patients with a high IQ, blending is presumed to have an effect on the representation of irony in schizophrenia subjects with a low IQ (IQ≤106). In these patients, however, the blend seems to ‘get stuck’, since there might be no effective means at hand to help them resolve the incongruity. This may impair these subjects’ ToM capabilities (Frith and Frith 2003), which prevents them from deciphering the enunciator’s ironic intent. Third, schizophrenic cognisers’ difficulty in understanding metaphor may arise due to incomplete blends, which might inhibit a metaphor from running a full course.

In short, schizophrenic irony may have blends, and the inability to understand ironic examples may be due to shortcomings in after-blend processes. In contrast, deficit in the comprehension of metaphor among schizophrenics might already occur at the level of conceptual integration. That is, while (in these patients) the representation of irony may strongly depend on the cogniser’s ToM capabilities, the failure to understand metaphor might be more the result of semantic deficit in the comprehender. This is compatible with the presumption
which was made in the dissertation that metaphor and irony may work under different assumptions.

In the dissertation I have made novel inferences in terms of schizophrenic blends in the representation of metaphor and irony. These presumptions might serve as the theoretical basis for empirical (especially fMRI) investigations of the ‘neural activation patterns’ of blending in these modes of thought. Besides, the study of conceptual integration in schizophrenics during their representation of metaphor and irony can be useful in finding new methods in the diagnosis and therapy of schizophrenia. This would be a fruitful area of future investigation.

Finally, psychological discussions often presume that irony is more difficult to understand than metaphor (Colston and Gibbs 2002). A comparison of the general semantic architecture of metaphor and irony is compatible with this claim.
IV. Literature cited in the thesis


List of publications related to the dissertation

Foreign language scientific articles in Hungarian journals (3)

1. Pálinkás, I.: Metaphor, irony and blending.
   *Argumentum (Debr.).* 10, 611-630, 2014. EISSN: 1787-3606.

   *Argumentum (Debr.).* 4, 204-213, 2008. EISSN: 1787-3606.

3. Pálinkás, I.: The Development of the Senses: Metaphorical Extension or Conceptual Integration?
   *Argumentum (Debr.).* 2, 191-197, 2006. EISSN: 1787-3606.

Foreign language scientific articles in international journals (2)

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   IF: 0.387

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Hungarian conference proceedings (1)

   In: Nyelv és kép. Szerk.: Gedő Tamás, Sárda Csilla, Kodolányi J. Főisk. ; Budapest : Tinta,
   Székesfehérvár, 199-207, 2015, (Segédkönyvek a nyelvészet tanulmányozásához, ISSN
   1419-6603 ; 176.) ISBN: 9789634090229

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