

**Doktori (PhD) értekezés**

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

**Pálinkás István**



**Debreceni Egyetem  
BDT  
2018**



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

Értekezés a doktori (Ph.D.) fokozat megszerzése érdekében  
a Nyelvtudományok tudományágban

Írta: Pálincás István okleveles angol nyelv és irodalom szakos tanár

Készült a Debreceni Egyetem Nyelvtudományok doktori iskolája  
(Modern Nyelvészeti programja) keretében

Témavezető: .....  
Dr. Laczkó Tibor

A doktori szigorlati bizottság:

elnök: Dr. ....  
tagok: Dr. ....  
Dr. ....

A doktori szigorlat időpontja: 2019. ....

Az értekezés bírálói:

Dr. ....  
Dr. ....

A bírálóbizottság:

elnök: Dr. ....  
tagok: Dr. ....  
Dr. ....  
Dr. ....  
Dr. ....

A nyilvános vita időpontja: 2019. ....



Én, *Pálinkás István* teljes felelősségem tudatában kijelentem, hogy a benyújtott értekezés önálló munka, a szerzői jog nemzetközi normáinak tiszteletben tartásával készült, a benne található irodalmi hivatkozások egyértelműek és teljesek. Nem állok doktori fokozat visszavonására irányuló eljárás alatt, illetve 5 éven belül nem vontak vissza tőlem odaítélt doktori fokozatot. Jelen értekezést korábban más intézményben nem nyújtottam be és azt nem utasították el.

Debrecen, 2018. november 3.

.....  
Pálinkás István



## ÖSSZEFOGLALÓ

### **A metafora és az irónia elemzése és összevetése egy fogalmi integrációs keretben**

Az értekezés célja összehasonlítani a metaforikus és az ironikus kifejezések megértési folyamatait fogalmi integrációs (Fauconnier és Turner 1994, 1998, 2002) modellalkotáson keresztül. A metafora és az irónia kognitív feldolgozási folyamatainak összehasonlító elemzése a szerveződés fogalmi szintjén történik egy olyan szemantikai keretrendszerben, amely az ironikus és a metaforikus megnyilatkozások mentálistér-szerkezetét vizsgálja. A disszertáció a metaforát és az iróniát nem a figuratív nyelvhasználat eseteinek vagy a szó retorikai értelmében vett alakzatoknak tekinti, hanem a gondolkodás jelenségeinek (gondolatmód).

Mivel a legmeghatározóbb metaforaelméletek explicit módon nem tárgyalják a metafora megértési folyamatát, ezért a disszertációnak további célja egy reprezentációs eljárást javasolni a metafora mentális feldolgozásának magyarázatára a blend (Fauconnier és Turner 1994, 1998, 2002) modelljére alapozva. Bár az értekezésnek nem célja az említett jelenséget egy újabb teóriával meghatározni, mégis egy munkadefiníció megfogalmazása válik szükségessé a metaforikus feldolgozásnak a disszertációban javasolt blend alapú elméletét figyelembe véve. Átfogó tudományos meghatározás helyett az értekezés a metaforikus megértés egy olyan alternatív, hibrid (komplementáris) modelljét vázolja fel, amely még nem dokumentált a szakirodalomban. A teória folyamatleírása szerint a metaforikus reprezentáció két alapvető szakaszból áll: először – az ötvöző-fázisban – fogalmi egységek összevetésére kerül sor. Elegendő hasonlóság esetén a második szakaszban projekció történik az egyik tapasztalati tartományból (forrás) a másikba (cél). Ezáltal a metafora teljes ívet fut be. A leképezés egyirányú (forrástartományból a céltartományba történik), és a forrásnak csupán azon elemei projektálódnak, amelyek kompatibilisek a céllal. Ez a folyamat emergens struktúra és átvitt értelmű jelentés konstruálódását eredményezi.

Az értekezésben bemutatott komplementáris modell sajátossága abban áll, hogy bár 'fogalmi ötvözt' feltételez, amely alternatív feldolgozási elméletek (például Fauconnier és Turner 1994, 1998, 2002) sajátossága, terminológiájában és struktúrájában hű marad a hagyományos, lakoffi metaforamodellhez (Lakoff és Johnson 1980).

A metafora fogalmi szinten történő feldolgozásának tárgyalásához két empirikus kutatás kapcsolódik. A vizsgálatok során kérdőívek formájában a metafora munkadefiníciójának megfelelő nyelvi példák prezentálása történik. Így tehát a kísérleti elemek (itemek) hasonló strukturális paraméterekkel (mélyszerkezettel) rendelkeznek. A mérésekben részt vevő laikus nyelvhasználók feladata a konverzációs közegbe ágyazott bizonyos nyelvi jelenségek

átfogalmazása (parafrázálása) illetve társalgási szituációk konstruálása ugyanezen kulcselemek felhasználásával. A kísérletekből világosan látszik, hogy a bennük prezentált itemek feldolgozása – az munkadefiníciónak megfelelően – (többnyire) átvitt értelemben történik. Ezzel teljesül a megfogalmazott munkadefiníció fontos kitétele, miszerint a disszertációban felvázolt újszerű, blend alapú alternatív metaforamodell a figuratív jelentésalkotás egyik eszköze. Ezt követően az értekezés néhány metaforikus példán bemutatja a hibrid metaforamodell működését (és ezen keresztül a metaforikus gondolkodás feltételezett agyi specifikumait).

A jelentős tudományos értékekkel bíró iróniaelméletek kritikai értékelése megmutatja, hogy a mértékadó iróniamodellek bizonyos, a szakirodalomban iróniának elfogadott nyelvi példákat nem képesek kezelni. Ezért a disszertáció az iróniát generikusan nehezen definiálható fogalomnak tartja. Ez a felismerés segíthet elkerülni a merev formalizálást és a torzító általánosítást. Ezért az értekezés szerint esernyőelmélet létrehozására tett kísérlet helyett az ironikus megnyilatkozások feldolgozási folyamatainak vizsgálata hasznosabb az irónia eddig ismeretlen aspektusainak megértése szempontjából.

Bár az irónia átfogó tudományos definiálása nem célja a disszertációnak, az értekezés 1) Wittgenstein (1953) 'családi hasonlóság' elméletére alapozva az ironikus jelenségeket bizonyos markerek, nyilvánvaló hasonlóságok mentén összetartozó csoportba sorolja, és 2) a disszertációban megfogalmazott blend alapú iróniaértelmezést figyelembe véve az iróniára vonatkozóan munkadefiníciót fogalmaz meg. Ennek megfelelően az értekezés az iróniát olyan gondolatmódnak tekinti, amely során diszkrepáns bemeneti fogalmi konstrukciókból inkongruens konceptuális tartalom projektálása történik egy ötvöző mentális térbe (blend). Az így generált kontradikció feloldása emergens implikációkhoz vezet, mely túlnyomó részt a megnyilatkozó negatív viszonyulását fejezi ki.

Ahhoz, hogy az iróniára konstruált újszerű feldolgozási algoritmus működését tesztelni lehessen, egy empirikus kutatás elvégzésére volt szükség. Egy kérdőív többnyire a (szemantikai és pszicholingvisztikai) szakirodalomból kölcsönzött irónia példákat disztraktor metaforikus elemekkel vegyített. A laikus nyelvhasználó feladata annak eldöntése volt, hogy a prezentált kísérleti itemek ironikusak-e vagy sem. Az értekezés a kutatásban részt vevő alanyok többsége által ironikusnak mondott példákat felhasználva tesztelte a disszertációban felvázolt blend alapú iróniamodell működését.

Az értekezés a metaforát és az iróniát ugyanazon elméleti keretben jellemzi, rávilágítva arra, hogy bár mindkét gondolatmód feldolgozása fogalmi integráció függvénye, a metafora és az irónia reprezentációja *különböző* mentális folyamatokon keresztül történik.



Mint újszerű felvetés a metafora és az irónia kutatásában, a lehetőségesség (posszibilitás) szintjén a disszertáció a metaforát és az iróniát érintő neurológiai, pszichológiai és pszicholingvisztikai kutatásokból vett empirikus adatokat összefüggésbe hozza a dolgozatban javasolt metaforikus és ironikus magyarázó modellek működésével. A disszertáció elméleti megállapításai és az említett tudományterületek kutatási eredményei a dolgozat azon tétele kapcsán hozhatók összefüggésbe, miszerint a metafora és az irónia feldolgozása *különböző* kognitív mechanizmusokon keresztül történik. Skizofrén betegek körében végzett neurológiai vizsgálatok szerint az irónia dekódolása a befogadó részéről való és a megnyilatkozó irányába tett 'elmeolvasás' függvénye. Ezzel szemben a metafora reprezentációját ugyanezen betegségben szenvedő alanyok esetén a szerveződés fogalmi integrációs szintjén való kognitív-szemantikai képességek befolyásolják. Ezt a különbséget az értekezésben bemutatott interdiszciplináris vizsgálatok – skizofrén betegek ironikus és metaforikus reprezentációinak idegnyelvészeti elemzései – is alátámasztják. Az ezekben a magyarázatokban tett megállapítások és következtetések a jövőben a metaforikus és ironikus fogalmi integráció agyi (idegi) aktivációs mintázatát kutató empirikus (főleg fMRI) kísérletek elméleti háttéréül is szolgálhatnak.

Néhány pszichológiai kutatás (például Colston és Gibbs 2002) szerint az irónia megértése több időt vesz igénybe, mint a metafora feldolgozása. Ez az állítás kompatibilis azokkal a disszertációban tett megállapításokkal, amelyek az iróniának és a metaforának az elemzés szemantikai szintjén történő összevetésekor láttak napvilágot.

Végezetül, a fogalmi integráció alkalmas arra, hogy összemérje az újraelemző típusú viccet és a nem újraértékelő típusú iróniát. Továbbá, egy viccnek a blend alapú elemzése megmutatja, hogy nem csak a metaforát és az iróniát, hanem a viccet is lehetséges gondolatmódként kezelni. Ez az elképzelés a humor kutatásában új orientációt jelenthet.

Konklúzióként elmondható, hogy a disszertáció újszerű feldolgozási modelleket dolgozott ki a metafora és az irónia reprezentációjára vonatkozóan, valamint egy új orientációt mutatott a metafora- és az iróniakutatásban, amely nem elméletvezérelt és definitív, hanem elemző és leíró jellegű. A metafora és az irónia gondolatmódként egy kognitív szemantikai keretben való összevetése megmutatja, hogy bár az említett jelenségek feldolgozása egyaránt feltételez egy fogalmi integrációs fázist, a megértési folyamat mindkét esetben idioszinkratikus vonásokat is tartalmaz. A dolgozat továbbá megmutatta azt, hogy a lehetőségesség szintjén a metafora és az irónia blend alapú leíró modellje összefüggésbe hozható az idegtudományok, a pszichológia és a pszicholingvisztika bizonyos empirikus megállapításaival.

## ABSTRACT

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

The aim of this dissertation is to contrast the cognitive processes underlying the representations of metaphor and irony. The comparison is made at the conceptual level of organisation in a blending framework (Fauconnier és Turner 1994, 1998, 2002) which investigates the mental space structures of ironic and metaphoric manifestations. The dissertation sees irony and metaphor as modes of thought rather than as figures of speech or rhetorical devices.

Since the most definitive theories of metaphor do not make explicit claims about how metaphor is actually processed, the dissertation aims to propose a blend-based (Fauconnier és Turner 1994, 1998, 2002) representational model. Although it is not intended to provide an established scholarly definition of this mode of thought, a working definition is proposed, which builds upon the processing model that the dissertation develops. Instead of constructing an all-inclusive definition, the dissertation depicts an alternative hybrid (complementary) model of representation which has not been documented in the literature. This account presumes that the understanding of metaphor incorporates two fundamental stages: the initial blending phase amounts essentially to collecting and marshalling information about conceptual packages. 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.

The model is unique since, although it incorporates ‘conceptual blending’, which is an attribute of some alternative 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).

The discussion of metaphoric representation on a conceptual level incorporated two experiments. In them linguistic examples which met the parameters of the working definition of metaphor were presented in a questionnaire. Thus the experimental elements (items) had similar structural frameworks. Participants (lay speakers) in the experiments were asked to paraphrase particular linguistic items (key elements) which were presented to them in a conversational setting. Subjects were also instructed to construct converses using the items. The experiments clearly show that – in accordance with the working definition – the key elements

in them have been processed mostly in a figurative manner. Thus, an important criterion of the proposed working definition of metaphor is met: the blend based, alternative representational model of metaphor, which the dissertation offers, is a means of figurative meaning construction. Then the dissertation demonstrates how the hybrid model and the brain presumably work when processing metaphors.

The critical evaluation of the most significant definitions of irony concludes that the most definitive models are unable to explain certain linguistic examples that are considered ironic manifestations in the literature. Therefore, the dissertation considers irony as a phenomenon which is difficult to define in a well-established scholarly definition. Not proposing an umbrella-explanation of irony may eliminate rigid (scholarly) formalisations and distorting generalisations from a discussion of this phenomenon. The dissertation claims that instead of trying to find an all-embracing definition, the 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 this mode of thought.

Although the dissertation does not aim to propose an all-embracing description of irony, it 1) considers Wittgenstein's (1953) theory of 'family resemblances' and sees examples of irony as members of a group which are related by particular similarity markers, and 2) provides a working definition, which essentially corresponds to the blend-based processing model of irony. This algorithm regards irony as a mode of thought which incorporates projection of incongruent cognitive content from discrepant input conceptual structures into a blended mental space. Resolving the contradiction in the blend leads to emergent implications which most frequently convey some negative evaluation.

In order to test the hybrid model of irony, an empirical study was necessary. In it a questionnaire presented examples of irony most of which were taken from the (semantic and psycholinguistic) literature. These items were mixed with metaphors, which served as distractor elements. The experimental participants were instructed to decide whether they thought the examples were ironic or not. Then the dissertation tested the complementary model of irony using some items which most subjects in the experiment had found ironic.

Both metaphor and irony are explained in the same cognitive semantic framework. A systematic comparison of these modes of thought reveals that although both metaphor and irony incorporate conceptual blending, they work under *different* assumptions.

As a novel proposition in metaphor and irony research, the dissertation, at the level of possibility, relates certain experimental (neurological, psychological and psycholinguistic) findings from metaphor and irony research to the proposed blending models of these modes of

thought. The theoretical assumptions of the dissertation and the experimental results coming from the above-mentioned fields of science will be related in connection with the presumption that metaphor and irony presuppose basically *different* processing mechanisms. Neurological investigations which were conducted among schizophrenic patients show that understanding irony largely depends on the cogniser's ability to 'read' the enunciator's mind. In contrast, the processing of metaphor in schizophrenia is essentially influenced by the comprehender's cognitive-semantic capabilities in the blend. This difference is also buttressed in the interdisciplinary approaches proposed in the dissertation. These are neurolinguistic analyses of metaphoric and ironic representations in schizophrenia. The inferences which are made in these approaches might serve as the theoretical basis for future empirical (especially fMRI) investigations of the 'neural activation pattern' of blending in metaphor and irony.

Some investigations in psychology (e.g., Colston and Gibbs 2002) claim that irony is more time consuming to understand than metaphor. This claim is compatible with the assertions made in the dissertation when contrasting metaphor and irony at the semantic level of analysis.

Finally, 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 a 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.

To conclude, the dissertation proposes novel representational models of both metaphor and irony, and shows a new orientation in their research – one which is not theory-driven or definition-centred but which is analytic in nature. Treating metaphor and irony as modes of thought, and comparing them in a cognitive semantic framework show that although the representations of both of these phenomena presuppose a blending phase, their processing mechanisms incorporate idiosyncratic attributes. The dissertation also shows that, at the level of possibility, the blend-based metaphor and irony models which are proposed in the dissertation can be related to empirical findings in neurology, psychology and psycholinguistics.

## ACKNOWLEDGEMENTS

I am deeply indebted to a number of people who have given me their advice, support and encouragement, without which the writing of this dissertation would have been much more difficult, if not impossible.

First, I am particularly grateful to my former advisor Olga Bársony for introducing me to the scientific discussion of verbal irony in one of her courses. It was during that time that I became enthused about figurative language.

I am truly thankful to my advisor Tibor Laczkó, whose advice and comments have significantly contributed to the completion of the dissertation. I am particularly grateful for his assistance in providing the link to alternative resources for my work.

My intellectual debt is to Péter Pelyvás. Without his persistent help this dissertation would not have materialised. His meticulous comments were an enormous help to me. I am very appreciative of all his efforts and time.

I would like to express my heartfelt gratitude to Günter Radden for his invaluable influence on my understanding of cognitive science in general and conceptual blending in particular. I also thank him for his warm encouragement and for the personal interest he has taken in my research.

I am indebted to my reviewers, Gábor Simon and Szilárd Tátrai (in alphabetical order), for their time, interest, and constructive comments on the initial draft of my dissertation. I am also thankful to the other members of my doctoral committee, Péter Csátár, Béla Hollósy and György Rákosi for their insightful questions.

Naturally, my acknowledgements also go to all of the informants who voluntarily participated in my research with both interest and enthusiasm.

Last but not least, I owe my deepest gratitude to my family for their love, support, and sacrifices. Without them, this dissertation would never have been written. This last word of acknowledgment I have saved for my dear parents, who have been with me all these years.

Debrecen, November 2018

## TABLE OF CONTENTS

<i>Összefoglaló</i> .....	<i>vii</i>
<i>Abstract</i> .....	<i>x</i>
<i>Acknowledgements</i> .....	<i>xiii</i>
<i>Table of Contents</i> .....	<i>xiv</i>
<b>CHAPTER 1 INTRODUCTION</b> .....	<b>1</b>
1.1 Preliminaries .....	1
1.2 Objectives and Presuppositions .....	3
1.3 Methodology and Significance .....	4
1.4 The Structure of the Dissertation .....	6
<b>CHAPTER 2 THE THEORETICAL BACKGROUND</b> .....	<b>10</b>
2.1 Cognitive Linguistics .....	10
2.1.1 Introduction .....	10
2.1.2 Language is Not an Autonomous Cognitive Faculty .....	10
2.1.3 Knowledge of Language Emerges from Language Use .....	11
2.2 Fundamental Principles of Cognitive Semantics .....	12
2.2.1 The Encyclopaedic View .....	12
2.2.2 Meaning-construction is Conceptual .....	14
2.3 Blending Theory .....	15
2.3.1 Introduction .....	15
2.3.2 Mental Spaces Theory .....	16
2.3.3 An Outline of Blending Theory .....	17
2.3.4 Some Limitations of Blending Theory .....	20

<b>CHAPTER 3 METAPHOR: AN OVERVIEW .....</b>	<b>27</b>
3.1 Introduction .....	27
3.2 The Development of a Concept: What is Metaphor? .....	28
3.2.1 Introduction .....	28
3.2.2 General Issues in the Study of Metaphor .....	28
3.2.2.1 The Existence/Non-existence of Metaphor .....	29
3.2.2.2 Literal Meaning .....	31
3.2.2.3 Literal Meaning and Metaphor .....	36
3.2.3 Theories of Metaphor .....	40
<b>CHAPTER 4 CONCEPTUAL METAPHOR THEORY .....</b>	<b>50</b>
4.1 Introduction .....	50
4.2 Conceptual Metaphor Theory .....	50
4.3 Some Limitations of Conceptual Metaphor Theory .....	53
4.4 Conceptual Metaphor Theory vs. Blending Theory .....	58
<b>CHAPTER 5 A COMPLEMENTARY THEORY OF METAPHOR .....</b>	<b>63</b>
5.1 Introduction .....	63
5.2 Complementary Views of Metaphor: A General Review of the Literature .....	63
5.3 A Working Definition (Hybrid Model) of Metaphor .....	67
5.4 Experiment 1 .....	69
5.4.1 Method .....	69
5.4.2 Participants .....	69
5.4.3 Materials and Expectations .....	69
5.4.4 Procedure .....	69
5.4.5 Results .....	70
5.4.6 Discussion .....	71
5.5 Experiment 2 .....	72

5.5.1 Method .....	72
5.5.2 Participants .....	72
5.5.3 Materials and Expectations .....	72
5.5.4 Procedure .....	72
5.5.5 Results .....	72
5.5.6 Discussion .....	74
5.6 Demonstrating How the Hybrid Model of Metaphor Works .....	74
5.7 Summary of the Chapter .....	77
<b>CHAPTER 6 IRONY: AN OVERVIEW .....</b>	<b>79</b>
6.1 A Short History of Irony .....	79
6.1.1 The Classical Tradition of Irony .....	79
6.1.2 Later Concepts of Irony .....	80
6.2 En Route to a Blending Explanation of Irony .....	85
6.3 Types of Irony .....	87
6.4 Irony vs. Sarcasm .....	88
6.5 More Contemporary Theories of Irony: The Traditional Pragmatic View .....	89
6.5.1 Haverkate on the Opposite of What is Literally Said: A Review .....	90
6.5.2 Predicate- and Propositional Negation, and the Representation of Irony .....	91
6.6 The Most Influential Theories of Irony of the 1980s and 1990s .....	96
6.7 An Overview of Mental Spaces- and Conceptual Integration Approaches to Irony .....	100
6.7.1 Mental Spaces Approaches to Irony .....	100
6.7.2 Blending Theory Approaches to Irony .....	104
6.8 Summary of the Chapter .....	109



<b>CHAPTER 7 AN ALTERNATIVE BLENDING ANALYSIS OF IRONY .....</b>	<b>110</b>
7.1 Introduction .....	110
7.2 A Working Definition of Irony .....	110
7.3 Experiment 3 .....	113
7.3.1 Introduction .....	113
7.3.2 Method .....	114
7.3.2.1 Participants .....	114
7.3.2.2 Materials and Expectations .....	114
7.3.2.3 Procedure .....	114
7.3.2.4 Results .....	115
7.3.2.5 Discussion .....	117
7.4 Blending as a Major Attribute in the Representation of Irony .....	118
7.4.1 A Blending Analysis of the Ironic “What Absolutely Beautiful Weather” .....	118
7.4.2 A Blending Analysis of the Ironic “Oh, Great – That’s Nice” .....	122
7.4.3 A Blending Analysis of the Ironic Killer Cured, Then Executed .....	124
7.5 Summary of the Chapter .....	126
<b>CHAPTER 8 STRUCTURAL ALIGNMENT OF METAPHOR AND IRONY .....</b>	<b>127</b>
8.1 Introduction .....	127
8.2 An Alternative Blending Analysis of the Ironic “I Love People Who Signal” .....	127
8.3 A Metaphor Analysis of “The Committee Has Kept Me in the Dark About This Matter” .....	129
8.4 A Blending Comparison of the Deviant Driver and the Committee Examples .....	130
8.5 A Blending Comparison of Metaphor and Irony .....	132
<b>CHAPTER 9 METAPHOR, IRONY AND BLENDING: AT THE INTERFACE OF NEUROLOGY, PSYCHOLOGY AND SEMANTICS .....</b>	<b>134</b>
9.1 Introduction .....	134
9.2 Neurocognitive Correlations of the Alternative Hybrid Model of Metaphor .....	134

9.3 Neurocognitive Correlations of a Blending Account of Irony .....	137
9.4 Irony is More Difficult to Understand than Metaphor: Psychological and Semantic Considerations .....	139
9.5 Neural Distinctions of Metaphor and Irony .....	142
9.6 Conceptual Integration in Schizophrenic Patients .....	143
9.6.1 A Neurolinguistic Approach to Understanding Irony in Schizophrenia .....	144
9.6.2 A Neurolinguistic Approach to Understanding Metaphor in Schizophrenia .....	150
9.7 Summary of the Chapter and Conclusions .....	152
<b>CHAPTER 10 FURTHER IMPLICATIONS, SUMMARY AND CONCLUSIONS ...</b>	<b>154</b>
10.1 Further Implications .....	154
10.2 Summary and Conclusions .....	157
<b>REFERENCES .....</b>	<b>161</b>
<b>LIST OF PUBLICATIONS OF THE AUTHOR .....</b>	<b>185</b>
<b>APPENDICES .....</b>	<b>186</b>

# CHAPTER 1

## INTRODUCTION

### 1.1 Preliminaries

Much of the meaning people intend to convey when they speak goes beyond what they appear to be saying. Figurative language, which is an omnipresent phenomenon that forms an integral part of our way of thinking, is a natural and fundamental medium to communicate such meaning.

We can distinguish among various forms of figurative language. When one says “*She swept me off my feet*”, for example, the speaker metaphorically expresses the idea that he fell in love with someone in an ardent manner. In another situation where a taxi driver expects his passenger himself to load his luggage into the boot, the client might express his criticism ironically by saying “*Thanks. That’s really kind of you*”.

Metaphor and irony are quite frequent objects of scientific investigation. Researchers from a variety of disciplines attempt to explicate different aspects of these phenomena,<sup>1</sup> 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 usually go parallel with ‘interpretive understanding’, the representation (that is, the understanding) 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 meta-representational 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.<sup>2</sup> According to Giora et al. (2000), this supports the idea that salient (i.e. frequent, familiar and prototypical) meanings are processed in the left hemisphere and less salient meanings are represented in the

---

<sup>1</sup> Note that metaphor and irony are highly versatile phenomena. Although the dissertation analyses them as ‘modes of thought’, depending on the aspect which the dissertation aims to profile in the discussion, they may also be referred to as ‘figures of speech’, ‘rhetorical devices’ or even as ‘linguistic items’.

<sup>2</sup> The literature has also provided evidence for *right* hemisphere involvement in metaphor comprehension (Bottini et al. 1994; Brownell 1988, 2000; Brownell et al. 1984; Pynte et al. 1996; Vitacco et al. 2002), and for *left* hemisphere functioning in the representation of irony (Shamay-Tsoory and 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.

right hemisphere (see also Burgess and Simpson 1988; Van Lancker and 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 understanding 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<sup>3</sup> 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 phenomena is that while metaphor is a matter of similarity, the essence of irony is the relation of incongruence (see also Winner and Gardner 1993; Colston and Gibbs 2002). A further significant difference 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 argued 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”<sup>4</sup> 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”<sup>5</sup> cues and constraints (for example, the ironic tone of voice or various kinesic<sup>6</sup> features), irony can easily be misunderstood (might be taken in a

---

<sup>3</sup> The word ‘logical’ should be treated with caution here since, for a linguist, one of the most significant attributes of metaphor is that it is *not* compositional. Therefore, it simply cannot be analysed by the tools of formal logic. Furthermore, Winner’s (1988) distinction should be refined to express the following idea: metaphor is still ‘meaning’, if non-compositional, but irony is ‘use’.

<sup>4</sup> Note that the dissertation doubts that ‘literal’ and ‘non-literal’ meanings are existent, legitimate and scholarly categories (see more on this in Section 3.2.2.3). Therefore, these terms are used in the dissertation only when quoting or referring to other scholars, or when explaining theoretical frameworks where these terms are accredited.

<sup>5</sup> See Section 2.2.1, which explains that the dissertation makes no principled distinction between semantics and pragmatics.

<sup>6</sup> Kinesic, that is non-linguistic attributes like bodily movements, gestures and facial expressions.

“literal” 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.<sup>7</sup>

Besides differences between metaphor and irony, however, these two phenomena 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 phenomena. 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.<sup>8</sup> Finally, Regel et al. (2010) argue that “pragmatic” knowledge seems to influence the interpretation of the communicative intent of both metaphor and irony.

## 1.2 Objectives and Presuppositions

Although, as the previous section shows, 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 at the conceptual level of analysis. Hence, the goals of the dissertation are the following: 1) to propose novel, blend-based (Fauconnier and Turner 1994, 1998, 2002) processing frameworks for a better understanding of how metaphor and irony work at the cognitive level of organisation, 2) to systematically compare and contrast these models of representation, and 3) to relate the proposed metaphorical and ironic explanatory frameworks to empirical findings on metaphor and irony from neurology, psychology and psycholinguistics.

---

<sup>7</sup> 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).

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 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).

<sup>8</sup> However, what role mentalizing might play in metaphoric and ironic representations is occasionally not explained in a coherent manner in the literature (cf. Chapter 9).

The dissertation is based upon the following presuppositions: 1) the representation of both metaphor and irony presupposes a set of cognitive operations for combining mental content from multiple conceptual spaces, 2) making sense of irony requires more processing effort than understanding metaphor, 3) meaning-construction is an on-line, cognitive-conceptual process for which words are triggers,<sup>9</sup> 4) (in cognitive semantics terms) metaphor and irony can (should) be analysed as ‘modes of thought’, 5) the processing models of metaphor and irony which the dissertation proposes result in metaphorical (figurative) *meaning* and ironic (figurative) *implication*, respectively, 6) word meaning incorporates more than the lexical content. Rather, as the encyclopaedic view holds, both linguistic and non-linguistic information constitute what a word means, 7) the theoretical predictions underlying the model of metaphor and the description of irony (the ones which are depicted in the dissertation) can be related to findings in neurosciences at the level of possibility.

### 1.3 Methodology and Significance

The dissertation proposes a blend-based hybrid model of metaphor which incorporates elements from both the Lakoffian model of metaphor (Lakoff and Johnson 1980), and Blending Theory (Fauconnier and Turner 1994, 1998, 2002). Under this view, which essentially constitutes the working definition of metaphor, metaphor is a mode of thought in which there is always an initial blending stage, which amounts essentially to collecting and marshalling information in order for projection to take place from one domain of experience to another. In case compatible structure is found in the input domains, cross-domain mapping occurs. 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.

In order to test how this complementary model works, two experiments were conducted. The primary goal of the studies was to test if the examples which the dissertation regarded as metaphorical were understood figuratively by ordinary language users.<sup>10</sup> In Experiment 1, participants were instructed to paraphrase expressions which were presented to them in a conversational setting. In Experiment 2, subjects were asked to write stories using the expressions. In both studies the dissertation made inferences from the answers that the participants provided as to the way(s) the items might have been processed. Then the

---

<sup>9</sup> See the encyclopaedic and the on-line meaning-construction presuppositions in more detail in Chapter 2.

<sup>10</sup> See the definition of ‘ordinary language user’ in Chapter 5.

dissertation tested the hybrid model of metaphor on some examples which met all the criteria of the working definition (in both experiments).

To construct a model of irony which has not been documented in the literature the dissertation considers Blending Theory (Fauconnier and Turner 1994, 1998, 2002) as the basic theoretical framework. The dissertation argues that irony appears in so many different forms and manifestations that it cannot be defined in a single, well-established scholarly definition. In spite of this, however, a blend-based (cognitive semantic) description will be provided, which the dissertation will treat as its working definition of this phenomenon: 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.

In order to test how the proposed model of irony works, an experiment was conducted to collect examples which ordinary language users found ironic. In the study the participants were asked 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.

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 the operation of the two processing models.

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

Finally, the dissertation shows that: 1) the proposed blend-based processing models of irony and metaphor provide new insights into how these modes of thought operate at the conceptual level; that is, how the brain might work when understanding metaphor and irony, 2) the comparison of the two modes of thought indicates that the human brain is exposed to linguistic input which might be processed in different (though somewhat related) ways, and 3) the alignment of data from semantic, psychological and neurological studies of metaphor and

irony may give rise to new directions of research in relation to possible connections between the theoretical and empirical investigations of these modes of thought.

In more general (philosophical) terms, analysing and studying the way humans think, and making assumptions about what might possibly happen in people's brain when they are exposed to language may contribute to a better understanding of both the self and its relationship with the world.

#### 1.4 The Structure of the Dissertation

The dissertation is divided into ten chapters. After this introduction (Chapter 1), the theoretical background for the dissertation is presented in Chapter 2. First, it offers some general statements on how metaphor and figurative language came to be recognised as significant factors in scientific investigation after their disregard in formal linguistics. Then, relevant aspects of cognitive linguistics and semantics are discussed. They bear particular relevance to the discussion of metaphor and irony in the particular (idiosyncratic) frameworks of conceptual integration, which are (in later chapters) proposed to explain these modes of thought.

The chapter also presents a general description of Blending Theory (Fauconnier and Turner 1994, 1998, 2002). This framework provides the underlying theoretical foundation for the discussion of irony and metaphor in Chapters 5, 7 and 8.

Chapter 3 focuses on those aspects of metaphor which should necessarily be addressed in a study of the representation of this mode of thought. Therefore, this chapter further refines the contextual setting for the discussion of metaphor: through contrasting the empiricist and the Romantic traditions, the chapter also adopts the idea that metaphors do exist.

Different interpretations of 'literal meaning', and possible relations between metaphor and this (kind of) meaning are also reviewed in this chapter. Literal meaning is difficult to describe, and the general cognitive-metaphoric processes can be clearly identified with the help of conceptual domains (of experience), which are evoked by particular words in metaphorical contexts. Therefore, the dissertation is *not* concerned with 'literal meaning' as described in any of its forms in the literature.

The chapter also critically evaluates earlier theories of metaphor. Although, in one way or another, they have all contributed to the description of this mode of thought, none of those models are without limitations. Additionally, they do *not* offer a detailed account of the processing particulars of metaphor. Therefore, a new approach is needed to better explain how metaphor actually works at the conceptual level of organisation. This is discussed in Chapter 5.



Chapter 4 first presents a general description of Conceptual Metaphor Theory (Lakoff and Johnson 1980). Then, this model is compared to Blending Theory (Fauconnier and Turner 1994, 1998, 2002) on a structural level.

Chapter 5 begins with a critical review of earlier complementary models of metaphor. Then it proposes a hybrid model of metaphor, which is based upon both Conceptual Metaphor Theory and Blending Theory. This complementary framework makes original contributions to the study of metaphor by explaining and illustrating with examples the particular *processing mechanisms* which underlie the representation of this mode of thought.

The chapter presents a working definition of metaphor, which 1) essentially corresponds to the complementary (hybrid) model of this mode of thought, and 2) is presupposed to be a means of figurative meaning construction. Then two experiments will be detailed. They were conducted to test whether or not the examples which are compatible with the proposed definition are understood figuratively by ordinary language users. Those items will satisfy both the above presupposition and the proposed metaphor model. Therefore, they will be considered metaphors, and some of them will be used to demonstrate how the hybrid model and the brain presumably work (when processing this mode of thought).

Chapter 6 first considers two aspects of irony which should necessarily be addressed in an academic treatment of this phenomenon: 1) the types of irony which the dissertation analyses are identified, and 2) the irony–sarcasm distinction is shown to be irrelevant for the analyses of the ironic examples in Chapter 7. Then, after a review of the most significant classical accounts of this mode of thought, more contemporary theories are critically evaluated. First, the Traditional Pragmatic Model (Grice 1975, 1978) is questioned by analysing particular examples of irony. The analyses show that the opposite of what an ironic speaker says could, in theory, have at least two different interpretations.

The second half of the chapter begins with a review of the most definitive theories of irony of the 1980s and 1990s. This is followed by a discussion of earlier mental space- and blending explanations of this mode of thought. Besides outlining those models, they are critically evaluated on grounds that have not been taken into account in the literature.

Since earlier attempts at defining irony do not seem to explain all manifestations of irony, the dissertation does not intend to construct an all-embracing scholarly definition. In spite of this, however, Chapter 7 considers Wittgenstein's (1953) theory of 'family resemblances' and sees examples of irony as members of a group which are related by particular similarity markers, and provides a working definition which essentially corresponds to the blend-based processing model of irony. This algorithm regards irony as a mode of thought which

incorporates projection of incongruent cognitive content from discrepant input conceptual structures into a blended mental space. Resolving the contradiction in the blend leads to emergent implications which most frequently convey some negative evaluation.

In order to see how the blend-based working definition of irony functions in terms of concrete manifestations of this mode of thought, an experiment was conducted, which is described in Chapter 7. The aim of the experiment was to collect linguistic examples which ordinary language users considered ironic. Later in the chapter the blending model of irony is tested using some of those items, and it is concluded that conceptual integration is an inherent process in the representation of irony.

Drawing on the discussions of metaphor and irony in terms of conceptual integration in previous chapters, a structural alignment of these modes of thought is presented in Chapter 8. A comparison of this kind has not been documented in the literature. The alignment focuses on the representational attributes of metaphor and irony. A detailed discussion of an example of these modes of thought shows that the understanding of both metaphor and irony incorporates a phase of conceptual integration (blending). The chapter also illustrates that apart from this similarity, the comprehension of metaphor and irony involves different, idiosyncratic processing structures.

Chapter 9 relates the theoretical models of metaphor and irony which are proposed in the dissertation to some empirical findings on these modes of thought. This chapter also connects the presumption that the processing of irony incorporates an incongruous blend and the claim that irony is more difficult to process than metaphor to experimental data from neurosciences, psychology and psycholinguistics on metaphor and irony.

A neurolinguistic analysis of schizophrenia patients' comprehension of irony and metaphor is related to the assumption that the schizophrenic operations of both of these modes of thought presuppose a blending phase. However, while difficulty in the representation of irony in schizophrenia may be due to the lack of the necessary after-blend processes, the comprehension of metaphor in that mental disorder might be hindered by incomplete blends. This has implications about the metaphor–irony distinction proposed in the dissertation: while the representation of irony depends to a considerable degree on people's mentalizing capabilities, the understanding of metaphor is fundamentally a matter of (their) semantic processing. The inferences which are made in this chapter might serve as the theoretical basis for future empirical (especially fMRI) investigations of the 'neural activation pattern' of blending in metaphor and irony.

Chapter 10 summarises the main findings of the research and concludes the dissertation. In addition, it offers further implications in which the notion of ‘conceptual blending’ is used to differentiate the ‘reanalysis type of joke’ from ‘non-reassessment examples of irony’.

## **CHAPTER 2**

### **THE THEORETICAL BACKGROUND**

#### **2.1 Cognitive Linguistics**

##### **2.1.1 Introduction**

Cognitive linguistics is considered to be a ‘movement’ or an ‘enterprise’, since it is not a single, specific theory. Rather, it is an approach that has adopted a common set of guiding principles, perspectives and assumptions which have led to a diverse range of overlapping (sometimes competing) and complementary theories. According to Croft (2009), cognitive linguistics is an approach to the study of language which emerged in the 1970s, and has been increasingly active since the 1980s. At the turn of the century a considerable amount of research has been carried out under the name of cognitive linguistics. Most of those investigations have focused on semantics, but a large number of studies are also devoted to morphology and syntax. Besides these, other areas of linguistics, for example language acquisition, phonology and historical linguistics have been involved in the cognitive linguistics paradigm.

The theoretical background for the discussion in the dissertation is provided by cognitive linguistics. The following (two) sections aim to depict the principles of that ‘movement’ which are the most relevant for the purposes of this work.

##### **2.1.2 Language is Not an Autonomous Cognitive Faculty**

In his discussion of the basic tenets of cognitive linguistics, Croft (2009) points out that language is not an autonomous cognitive faculty. This hypothesis has two major implications for cognitive linguistic research. First, as Croft states,

[m]uch cognitive linguistic research has been devoted to elucidating conceptual structure and cognitive abilities as they are seen to apply to language, in the effort to demonstrate that language can be adequately modeled using just these general conceptual structures and cognitive abilities (2009: 3).

In accordance with this, Chapters 5 and 7 of this dissertation are devoted to explicating cognitive linguistic models of cognitive structure and abilities.

Second, models of cognitive psychology (especially models of memory, perception, attention and categorisation) have had a great influence on cognitive linguistics. Psychological

models of memory, for instance, have inspired linguistic frameworks which organise linguistic knowledge into frames/domains. Croft also states that both semantic and grammatical category analysis in cognitive linguistics have been greatly influenced by psychological models of categorization, in particular prototypes and graded centrality, and more recent models of category structure (see, e.g., Lakoff 1987; Taylor [1989] 1997).

### **2.1.3 Knowledge of Language Emerges from Language Use**

Croft asserts that “knowledge of language emerges from language use” (2009: 3). That is, based on their cognition of particular utterances on specific occasions of use, cognisers build up categories and structures in semantics, syntax, morphology and phonology. This has relevance in the dissertation, since, as general cognitive abilities, the inductive processes of abstraction and schematisation are significant both in the discussion and the representation of metaphor and irony.

The two best-developed areas of cognitive linguistics are cognitive semantics and cognitive (approaches to) grammar. Cognitive grammarians (e.g., Ronald Langacker) aim to model the language system (the mental ‘grammar’) and to understand the working mechanisms of language by considering what is known about the conceptual system. In contrast, cognitive semanticists rely on language in their efforts to understand how the conceptual system works. That is, models of language proposed in the cognitive linguistics tradition should reflect what is known about the human mind. As Lakoff and Johnson describe,

... our conceptual system is not something we are normally aware of. In most of the little things we do every day, we simply think and act more or less automatically along certain lines. Just what these lines are is by no means obvious. One way to find out is by looking at language. Since communication is based on the same conceptual system that we use in thinking and acting, language is an important source of evidence for what that system is like (1980: 3).

Cognitive semantics emerged in the late 1970s as a reaction against the objectivist tradition in philosophy and the related approach, truth-conditional semantics, developed in the field of formal linguistics. According to the objectivist position, there exists an objective external reality against which descriptions in a language can be judged true or false. Another important tenet of truth-conditional semantics is that sentence meaning is compositional: it is composed from word meaning, together with structure that the grammar imposes on the words.

While this idea might work for some sentences, it may run into difficulty in explaining non-compositional idioms like ‘kick the bucket’ (Lakoff 1987; Lakoff and Johnson 1980).

Metaphor was excluded from the description of language, primarily because the descriptive apparatus available to the objectivist philosophy was not capable of stating general principles governing such phenomena. As Johnson argues,

[in an objectivist framework] meaning is fundamentally literal. Literal concepts or terms are, by definition, simply those entities whose meanings specify conditions of satisfaction for the objects, properties, and relations they designate. It follows that there can be no irreducibly figurative or metaphorical concepts, because metaphorical projections cut across basic experiential domains, and such cross-categorical projections are held to have no counterparts in the real world, which supposedly has discrete and definite categorical boundaries (1989: 110).

It should consequently come as no surprise that a radically different approach to language was needed to be able to treat “nonfinitary phenomena” as true linguistic manifestations. This enterprise is cognitive semantics which provides the theoretical framework for the present dissertation. Therefore, this chapter provides a description of the nature of cognitive semantics, focusing on the aspects that are of particular relevance for the purposes of this work.

## **2.2 Fundamental Principles of Cognitive Semantics**

### **2.2.1 The Encyclopaedic View**

Another significant principle of cognitive semantics is that meaning-construction draws upon ‘encyclopaedic knowledge’. According to the traditional view in semantic theory, meaning is composed of a dictionary and an encyclopaedic constituent; however, it is only the dictionary component that constitutes the study of lexical semantics (the branch of semantics concerned with the study of word meaning).

The dictionary view has a number of shortcomings, as the separation of lexical and world knowledge appears to be problematic in a number of ways (Fillmore 1982, 1985; Haiman 1980; Langacker 1987). As, for example, Evans and Green (2006) explain, consider the idea, as assumed by the dictionary view, that word meaning has an essential aspect, the so-called ‘semantic core’. This constituent is distinguished from other non-essential parts of a word’s meaning, such as the associations that a word evokes. Many semanticists consider this

distinction as the one between a word's 'denotation' (the set of entities in a world that a word can refer to) and its 'connotation' (the associations that a word evokes).

This aspectual distinction gives a hard time to the dictionary view (of word meaning) for a number of reasons. Consider the following example: most speakers would agree that the words 'bucket' and 'pail' share the same denotation (cylindrical vessels with handles that can be used to carry water). However, in terms of their connotations, these two words differ significantly: a pail can be metal or wooden (but not plastic), and it is associated with vessels of a certain size (for example, a small bucket that a child uses for making sandcastles could not be described as a 'pail'). Thus, 'pail' and 'bucket' show a different linguistic distribution: they do not participate in the same collocational expressions. As an example, we can say 'bucket and spade' but not 'pail and spade'. Given the observations above, cognitive linguists argue that the decision to include certain kinds of information in the 'core' meaning is arbitrary (Evans and Green 2006).

Partly for the reasons outlined above, cognitive semanticists reject the 'dictionary view' of word meaning in favour of the 'encyclopaedic view', which, rather than representing a model of the knowledge of linguistic meaning (as in the 'dictionary view'), focuses on a model of the system of conceptual knowledge that underlies linguistic meaning.

One of the most significant characteristics of the encyclopaedic view (and of cognitive linguistics, too) is the idea that there is no principled distinction between semantics and pragmatics; that is, 'core' meaning on the one hand, and social, cultural meaning on the other. This view suggests an extension of 'semantic' in the sense that knowledge of what words mean and knowledge of how words are used are *both* types of semantic knowledge. This, of course, does not mean that the existence of pragmatic knowledge is denied.

Cognitive semantics does not presuppose an autonomous mental lexicon that incorporates semantic information separately from other kinds of (linguistic or non-linguistic) knowledge. As Evans and Green (2006: 216) argue, "... there is only encyclopaedic knowledge, which subsumes what we might think of as dictionary knowledge".

The reason for adopting this position follows, in part, from the usage-based conception holding that meaning is fundamentally guided by context. Therefore, word meaning is a consequence of language use, of which context is an integral part, and it is pragmatic meaning (rather than coded meaning) which constitutes the 'real' meaning. Thus, if meaning-construction is a matter of language use, meaning is fundamentally pragmatic in nature (Evans and Green 2006).

### 2.2.2 Meaning-construction is Conceptual

As is indicated in the previous section, cognitive semantics assumes that language itself does not encode meaning. Rather, meaning is constructed in a dynamic fashion through cognitive-conceptual processes to which words and other linguistic units are only ‘prompts’. Thus, meaning-construction, which involves inferencing strategies that relate to different aspects of conceptual structure, organisation and packaging (Sweetser 1999), is equated with conceptualisation.

The dynamic quality of meaning-construction has been most convincingly modelled by Fauconnier (e.g., 1994, 1997), who, in his analyses, makes use of conceptual links: local connections between distinct mental constructions, (relatively small) conceptual packets built up for purposes of local understanding and action. To illustrate the conceptual nature of meaning-construction, let us consider the following example, which is taken from Taylor (2002):

(1) In France, Bill Clinton wouldn’t have been harmed by his relationship with Monica Lewinsky.

The representation of (1) involves the conceptual integration of two input mental constructions: a) one in which Clinton is the President of the United States, and Lewinsky is his intern. They have an affair, which finally comes out and scandal ensues; and b) a cognitive structure which contains the President of France, and the knowledge about French culture which deems it permissible for French presidents to have extra-marital relationships. In a third mental ‘organisation’, information is co-present from both input mental constructions: Clinton is the President of France, and Lewinsky is his intern. They have an affair, they are found out, but there is no scandal. Through making conceptual links between these two cognitive structures we learn that cultural and moral standards in relation to extra-marital affairs are radically different in the United States and France. This meaning is emergent, since it is not part of either of the input mental constructions.

The analysis of (1) not only explains meaning-construction in a conceptual framework but also (inherently) assumes that the meaning of that example is *non*-compositional. As Evans notes,



[t]he traditional view of meaning-construction is based on the assumption that words have sense-units, or ‘meanings’, which are typically conceived as static ‘lexical entries’ (Allwood 2003; Pustejovsky 1995; Tyler and Evans 2001). Lexical entries are thought of in many formal and computational approaches to linguistic semantics as being tagged with syntactic, morphological and semantic features. These lexical entries combine, together with the grammatical structure of the sentence, to produce sentence-meaning, known technically as a ‘proposition’. The combinatorial property of language that facilitates the integration of word ‘meanings’ with syntactic structures producing sentence-meaning is referred to as the principle of compositionality (2006: 492).

However, the meanings of the words and the grammatical structure in (1) do not generate<sup>11</sup> the idea that ‘in France the cultural and moral sensitivities regarding extra-marital affairs between politicians and members of their staff are such that Bill Clinton as the President of France would not have been politically harmed by his extra-conjugal relationship with his intern, Lewinsky’. Therefore, the intended meaning of (1) is not compositional (but emergent).

In its analysis of linguistic examples in Chapters 5 and 7, the dissertation makes extensive use of Fauconnier’s view of meaning construction. Therefore, the following sections discuss that cognitive model in more detail.

## **2.3 Blending Theory**

### **2.3.1 Introduction**

A framework which was 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 (see Chapter 4), and also to explain examples which that traditional model was unable to handle. The crucial element of Blending Theory is that meaning-construction typically involves integration of structure that gives rise to a mental construction which is different from the sum of its composite parts. Blending theorists argue that this process of conceptual integration or, in other words, ‘blending’ is a general and basic cognitive operation which is central to the way we think.

Conceptual integration has been demonstrated in the discussion of the Clinton-as-French-President example in (1). For another illustration of blending, consider the category

---

<sup>11</sup> The word ‘generate’ is used here in the following sense: the implicature of (1) comes into existence by suggesting that the participants and the relations holding between them should be seen in France, where Clinton and Lewinsky are French, since the French would not forgive the *American* Clinton anything.

(concept) of PET FISH. As Evans and Green (2006) argue, let us suppose that a prototypical PET is fluffy and affectionate, and a prototypical FISH is grey in colour and medium-sized (like a mackerel). A prototypical PET FISH, however, is small and orange rather than medium-sized, grey, fluffy and affectionate. That is, PET FISH is not the straightforward composite of the meanings of the two conceptual categories PET and FISH. Instead, this category selectively integrates aspects of each of the source categories in order to produce a new category with its own distinct internal structure: a cognitive model in which the prototypical PET FISH is the goldfish. This is achieved by conceptual blending.

### 2.3.2 Mental Spaces Theory

Blending Theory (Fauconnier and Turner 1994, 1998, 2002) derives from two traditions within cognitive semantics: Conceptual Metaphor Theory (CMT) and Mental Spaces Theory. CMT will be introduced in Chapter 4. The primary concern now is to outline Mental Spaces Theory, which relates to Blending Theory most in terms of its architecture and its central concerns.

According to Fauconnier's ([1985] 1994) Mental Spaces Theory, during ongoing discourse representation, sentences trigger the construction of highly complex cognitive lattices. These temporary conceptual packages are called 'mental spaces', which are interconnected in working memory, can be modified dynamically as thought and discourse unfold, and can be used generally to model dynamic mappings in thought and language. Fauconnier and Turner also provide a neural interpretation of mental spaces: they are "sets of activated neuronal assemblies" (2002: 40). However, discussing mental spaces in *neural* terms is not typical of how Fauconnier and Turner normally treat those cognitive organisations.

Although motivated by linguistic data, mental spaces are not specifically linguistic in nature. In fact, they reflect the operation of more general cognitive processes. In Mental Spaces Theory, words do not refer directly to entities in the world. Rather, linguistic cues prompt speakers to set up elements in a referential structure that may or may not refer to objects in the world.

As Coulson and Oakley explain, mental spaces contain "partial representations of entities and relations of any given scenario as perceived, imagined, remembered, or otherwise understood by a speaker" (2000: 176-177).<sup>12</sup> This representation typically includes elements to represent each of the discourse entities, and simple frames to represent the relationships that

---

<sup>12</sup> This definition of the 'mental space' is obviously similar to the explication of the Idealized Cognitive Model (ICM) in the Lakoff-Langacker tradition. Essentially, the latter considers the former as one of its forerunners; as Lakoff states, "an ICM, as used, structures a mental space" (1987: 68ff).

exist between them. Because the same scenario can be construed in multiple ways, mental spaces are often used to partition incoming information about elements in the referential representation. As an illustration of these points, consider the remark “*When I was twelve, my parents took me to Italy*” (Coulson and Oakley 2000). The representation of this utterance involves two mental spaces: one of them incorporates (mental) information about the time of speaking, and the other about the time when the speaker was twelve years old. The focal participants in the two spaces are in correspondence. This relation is represented via an ‘identity connector’. As Coulson and Oakley (2000) argue, presupposing that the information is located in two distinct mental constructions makes it possible for the reader (or hearer) to understand that while the speaker was in Italy when he was twelve, he need not currently be there. Coulson and Oakley conclude that the use of mental spaces in explaining the representation of utterances allows the addressee “to divide information at the referential level into concepts relevant to different aspects of the scenario” (2000: 117).

### 2.3.3 An Outline of Blending Theory

Blending Theory, which holds that meaning-construction fundamentally involves the integration of mental structures, often uses ‘conceptual integration networks’ in its discussion of particular linguistic phenomena. Such 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 and 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 new emergent structure. For an illustration, consider a blending analysis of “*The committee has kept me in the dark about this matter*”.<sup>13</sup> Figure 1 provides a schematic representation of the conceptual integration network associated with this example:

---

<sup>13</sup> This example is also treated as a metaphor in, for instance, Grady et al. (1999).

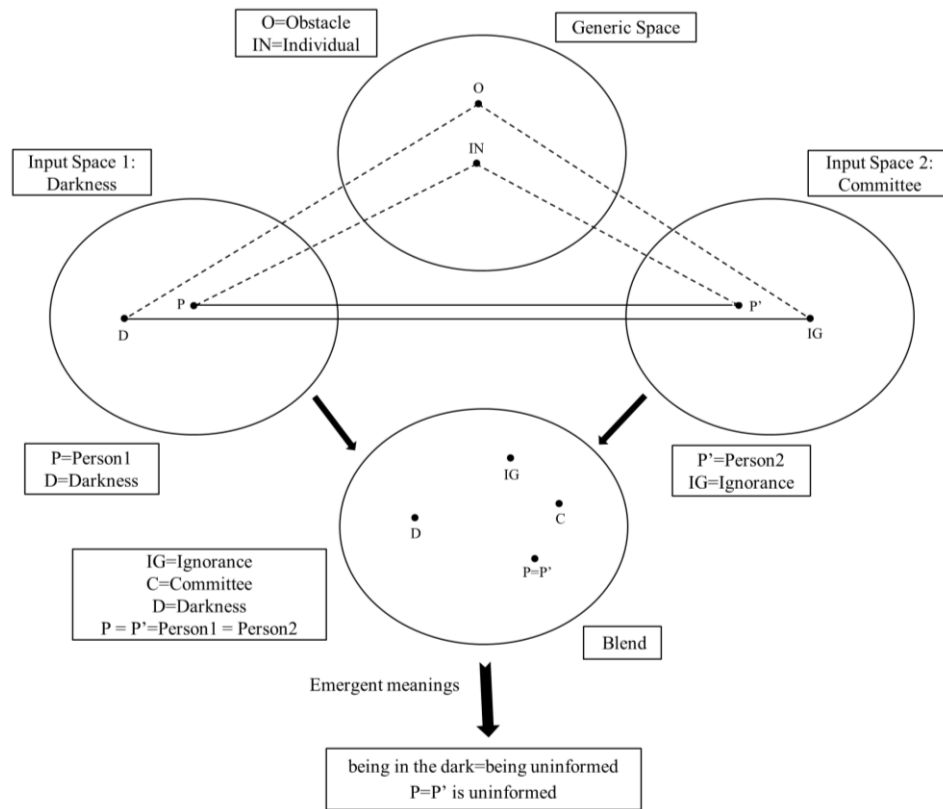


Figure 1. Conceptual integration network: “*The committee has kept me in the dark about this matter*”

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 (non-figurative) 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 both of making a decision and of informing another person (P’) about their resolution.<sup>14</sup>

<sup>14</sup> 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. 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).

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.<sup>15</sup> 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.

In the Blend, 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: 103). At the same time, the physical and perceptual state of being in the dark is identified as being (metaphorically) identical to being uninformed/ignored. 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.<sup>16</sup>

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.

An alternative discussion of the committee example above helped outline Blending Theory, whose basic principles are used in explaining both the complementary view of metaphor in Chapter 5 and the blending account of irony in Chapter 7. Conceptual integration will also play a pivotal part in the blending comparison of metaphor and irony in Chapter 8.

---

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.

<sup>15</sup> This, however, does not mean that elements of content that are controversial would *not* be projected into blends. This is usually seen as the most significant property of blending (as opposed to metaphor, where the Invariance Principle ensures that only those aspects of the source are carried over to the target that are consistent with it - see Section 4.2 for the discussion of the Invariance Principle). Consider the example "*This surgeon is a butcher*", whose analysis in a conceptual integration framework involves a blend in which conflicting elements such as a living patient and a dead animal are co-present. Also, as we shall see later, ironic blends also contain contradictory material.

<sup>16</sup> For a more detailed discussion of the in-blend processes of this example, see Pálincás (2014).

### 2.3.4 Some Limitations of Blending Theory

In their discussions relating to the constraints of conceptual integration (blending), both Bache (2005) and Gibbs (2000) find Blending Theory vulnerable to the charge that it is too powerful. As Bache argues, the theory is applied so generally to human cognition and culture<sup>17</sup> that it runs the risk of losing its ability to account satisfactorily for individual-specific phenomena. The depth of Blending Theory is only too easily sacrificed for scope of application. That is, if the scope of Fauconnier and Turner's model is not properly constrained, the theory ends up having what may be called a 'ubiquity problem'. Bache (2005: 1617) suggests the following formulation of the ubiquity problem in relation to Blending Theory: "... if blending is everywhere at all times, governing the human mind in general, it can hardly account for any specific manifestations of human cognition (such as language, etc.) with sufficient precision".

Gibbs suggests that to tackle the too general nature of blending, localized hypotheses in relation to different aspects of the blending mechanism should be created. He says

... it is first important to realise that blending theory is not a single theory that can be studied and potentially falsified within a single experimental test. Instead, blending theory is a broad framework that suggests a variety of localized hypotheses, each of which may be experimentally examined under different empirical conditions (2000: 349).

Fauconnier and Turner (2002), however, both implicitly and explicitly address the charge that Blending Theory may be too strong. As an implicit argument, the authors suggest different types of blends. These cognitive constructions represent typical hallmarks on a broad continuum of blending. Let us consider each in turn.

For 'simplex networks' an effective frame has been provided by human cultural and biological history. This frame, which constitutes one input space, applies to certain kinds of elements as values. A readily available frame (network) of human kinship is 'the family', which includes roles for father, mother, child, and so on. Suppose that an integration network has one space containing only this frame, and another space containing only two human beings, Ben and Sally.<sup>18</sup> When we conceive of Ben as Sally's father, we have created a blend in which some

---

<sup>17</sup> For example, blending is applied to explain music (Zbikowski 1996, 1999, 2002), mathematics (Fauconnier and Turner 1998; Núñez 2005; Robert 1998) and visual art (Fauconnier and Turner 2002).

<sup>18</sup> This intrinsic relationship between a family frame and its elements plays an important role in Langacker's (1992) analysis of 'of': like a 'family' has intrinsic relations with its elements (father, daughter, and so on), in 'the city of Paris' the category label (city) is intrinsic to the conception of a particular proper noun entity (Paris) that instantiates the category.

of the structure of the ‘family’ frame is integrated with the elements Ben and Sally. In the blended space, Ben is Sally’s father. This is a simple network in which the cross-space mapping between the input spaces is a frame-to-values connection; that is, an organised bundle of role connectors. In this example, the role ‘father’ connects to the value Ben and the role ‘daughter’ connects to the value Sally.

In ‘mirror networks’ all spaces in the network share an organising frame that specifies the nature of the relevant activity, events, and participants. The input spaces mirror each other in the sense that they have the same organising frame. So does the generic space. The blended space also has that frame, but quite often, in the blend, the common organising frame of the network inheres in a richer frame that only the blend has. Consider the following example:

(2) At this point, Great American II is 4.5 days ahead of Northern Light.

This expression frames two boats (Great American II and Northern Light) as sailing on the same course during the same time period in 1993. It blends the event of 1853 and the event of 1993 into a single event. In this example, the shared organising frame ‘boat sailing along an ocean course’ inheres in the more elaborate frame in the blend of ‘sailboats racing along an ocean course’.

In ‘single-scope networks’ the input spaces have different organising frames, one of which is projected unchanged to organise the blend. This type of conceptual integration can be illustrated with Fauconnier and Turner’s example, in which business competition can be understood in terms of the frame of a boxing match:

The scenario of two men boxing gives us a vibrant, compact frame to use in compressing our understanding of two CEOs in business competition. We say that one CEO landed a blow but the other one recovered, one of them tripped and the other took advantage, one of them knocked the other out cold (2002: 126).

In this conceptual integration network there is cross-space mapping between the boxing and the business inputs. This maps, for example, each boxer to a CEO, a blow to an effective action, a punch to an effort by one of the CEOs, and staying in the fight to continuing the business competition. In this example (and in single-scope networks across the board), the construction of the blend is a matter of a highly asymmetric projection: one of the inputs but not the other supplies the organising frame (‘boxing’) and, therefore, frame-topology. For example, there are

only two agents, in close spatial and temporal proximity, engaged in physical adversarial action (cf. Fauconnier and Turner 2002).

In ‘double-scope networks’ two input spaces have different organising frames but each contributes to the organising frame of the blend, which has an emergent structure of its own. The inputs often have quite different frames. The sharp differences in input structure offer the possibility of rich clashes, which present challenges to the imagination. Therefore, the resulting blends can be highly creative.

As Fauconnier and Turner explain, ‘same-sex marriage’ has a double-scope network. The input spaces are the traditional scenario of ‘marriage’, on the one hand, and an alternative living arrangement scenario which involves two people of the same sex, on the other. The inputs are connected via cross-space mappings, in which prototypical elements, such as partners, common dwellings, commitment and love, are linked. Selective projection imports a frame structure from each input. It takes ‘wedding ceremonies’, ‘social recognition’, and ‘mode of taxation’ from the ‘traditional marriage’ input, and ‘same sex’, ‘absence of biologically common children’, and the ‘culturally defined roles of the partners’ from the alternative living arrangement input. Emergent properties will characterise this (new) social structure reflected by the blend.<sup>19</sup>

According to Bache (2005), double-scope networks are by far the most complex and innovative in the sense that they require selective projections from the input mental spaces to create a novel organising frame in the blend. Fauconnier and Turner (2002) also attach special importance to double-scope networks. They claim that a number of significant human singularities, including language, are the consequence of the human capacity for double-scope blending.

In addition to their fourfold typology of networks, Fauconnier and Turner (2002) propose a set of *explicit* arguments, in the form of different constraints, to counter the claim that conceptual blending is too powerful. For example, they distinguish between ‘constitutive principles’ and ‘governing principles’. Constitutive principles are the general structural and

---

<sup>19</sup> The discussion of ‘marriage’ in this paragraph is similar to Lakoff’s (1987) analysis of ‘mother’ in terms of a ‘cluster model’. In Lakoff’s view, the ideal model of a mother is a combination (cluster) of the following cognitive models: the birth model, the genetic model, the nurturance model, the marital model and the genealogical mother (see the details in Lakoff 1987). These models are converging into an ‘ideal model’: “a mother who is and always has been female, and who gave birth to the child, supplied her half of the child’s genes, nurtured the child, is married to the father, is one generation older than the child, and is the child’s legal guardian” (Lakoff 1987:83). The divergences from this cluster (stepmother, unwed mother, birth mother, and so on) are considered variants of or non-central extensions to the central model. The variants are determined by and comprehended via their relationship to the ideal model.

In a similar fashion, ‘same-sex marriage’ could be considered an extension to the central category ‘marriage’. The conceptualisation of this double-scope network is largely determined by the relationship between the central (marriage) and the peripheral (same-sex marriage) models (in the blend).



dynamic rules which determine the relevant processes of conceptual integration: they define blending with reference to such things as partial cross-space mappings and generic spaces, selective projections from input spaces to the blend, and the emergence of new structure in the blend.

On the other hand, governing principles are specific ‘optimality principles’ which optimize the blend within the general framework defined by constitutive principles. They, for example, complete patterns and maintain connections in networks – all with a view to achieving ‘human scale’. They are actually guidelines which help a blend succeed. Together with constitutive principles they impose serious constraints on blending, but do not in fact make it possible to predict new blends with certainty.<sup>20</sup> As Fauconnier and Turner argue,

[i]n crucial respects, the construction of meaning is like the evolution of species. It has coherent principles that operate all the time in an extremely rich mental and cultural world. Many, many, many new integrations are attempted and explored in an individual’s backstage cognition, and in interchange by members of a culture, and most of them never go anywhere. But enough survive to provide all the languages, rituals, and innovations we see around us. We need to explore what makes for success versus failure in conceptual integration (2002: 310).

Continuing the discussion of the limitations of Blending Theory, let us consider the ‘generality problem’ (of this model) from Gibbs’ (2000) perspective. He argues that, similar to most scientists, psychologists favour hypotheses that lead to specific experimental predictions. Gibbs also draws attention to the claim that perhaps the most central feature of any theory with psychological consequences is that it must, in principle, be falsifiable (Popper 1959). This leads him to ponder the question whether Blending Theory is, in principle, falsifiable. Quite often, Gibbs explains, cognitive linguists are claimed to infer aspects of conceptual knowledge from analyses of systematic patterns of linguistic structure. This mode of scientific behaviour, however, can lead to theories that appear to have a ‘post hoc’ quality. Thus, positing that blended spaces underlie many systematic patterns of linguistic expressions is seen as providing only a ‘motivated’ explanation for linguistic behaviour. On the other hand, many (cognitive) psychologists and psycholinguists wish to be able to predict behaviour *in advance* according to the hypothetico-deductive method of scientific inference. They seek empirical, objective

---

<sup>20</sup> Blending here is compared to ‘football’, which also has its strict constitutive and governing rules. In spite of this, however, one can never predict the exact outcome of a game (cf. Fauconnier and Turner 2002).

evidence (i.e., not based on a theorist's private intuitions) that people's conceptual knowledge (somehow) predicts the existence of different linguistic behaviour, and not that people's linguistic behaviour can be explained *post hoc* by positing theoretical entities such as blending conceptual spaces (or any other notion from cognitive linguistics such as, for example, 'image schemas' or 'conceptual metaphor').

Falsification of a particular hypothesis requires some statement *in advance* as to the very conditions under which the hypothesis should even be evaluated. However, Blending Theory is not a single model that can be studied and falsified within a single experimental test. Instead, it is a broad framework that suggests a variety of localized hypotheses, each of which may be experimentally evaluated under different empirical conditions. However, theories with the greatest interdisciplinary appeal, and most likely to be seen as reasonable (potential) candidates as psychological theories, will be those with specific hypotheses which give rise to empirical predictions that can, in principle, be falsified. As Gibbs (2000) suggests, Blending Theory needs to find ways in which different parts of the theory can be articulated so that these hypotheses can be subject to tests of falsification. The introduction of Fauconnier and Turner's (1998, 2002) optimality principles (of blending) is a promising move to start thinking about empirically examining the claims of Blending Theory.

Another challenge for Blending Theory concerns the idea, which is sometimes advocated by blending theorists, that more complex cross-domain mappings are required to understand certain meaning-constructions as compared to others. One significant empirical claim following this idea is that additional cognitive effort may be needed, and thus more processing time, to understand linguistic expressions that require more complex cross-domain mappings than is the case to interpret less complex examples.<sup>21</sup> As Gibbs (2000) argues, this empirical hypothesis may be correct. Thus, longer processing time may be needed to understand a complex (metaphorical) blend, such as "*John is digging his own grave*", than it takes to comprehend an equivalent literal utterance (e.g., "*John is hurting himself by his actions*"). However, and this is where Blending Theory may be mistaken, this result may be due to other variables like the frequency of the individual words involved in the utterance – that is, shorter reading times of the literal phrases because their words are more frequent, and easier to access from the mental lexicon.<sup>22</sup>

The foregoing discussion concerns (more) general and theoretical limitations of Blending Theory. Let us conclude this section with discussing a *specific* example in which

---

<sup>21</sup> See Coulson (2001) for some thoughts on this idea.

<sup>22</sup> Cf. the discussion of Giora's (1997, 1999, 2003, 2004) Graded Silence Hypothesis in Chapter 3. For more details on the criticism of Blending Theory, see Bache (2005) and Gibbs (2000).

blending, though considered as the fundamental processing mechanism, falls short of the mark, at least as the basic, underlying algorithm in the understanding process. Grady et al. (1999) suggest a relation between metaphorical extension and conceptual integration where conceptual metaphor may serve as an input for blending processes. This might indicate that metaphorical extensions depend upon blending operations. To put it another way, in particular cases Grady et al. seem to ‘overburden’ the process of sense development with unnecessary structures of conceptual integration where a unidirectional metaphoric mapping would obviously do, as in the nation-as-ship metaphor below:

(3) With Trent Lott as Senate Majority Leader, and Gingrich at the helm of the House, the list to the right could destabilize the entire Ship of State.

Grady et al. argue that sense development in (3) is largely dependent upon the source-path-goal schema. Pelyvás (2002), however, claims that this metaphor is more complex than that, since it is not only the course of the ship but also its safety that is at issue. Pelyvás also notes that Grady et al. do not seem to understand how the presence of two right-wing politicians (Trent Lott and Newton Gingrich) could cause a “list to the Right” that “could destabilise the Ship of State”. They suggest that the representation of (3) can incorporate complicated scenarios (e.g., their handling of very heavy cargo, or their steering and handling of the sails in particular wind conditions), in which the actions of two individuals could cause a ship to list dangerously to one side. Grady et al. also argue that the causal structure underlying (3)

appears not to be projected from the source domain of ships, but from target domain logic, in which the Senate Majority Leader and the Speaker of the House inevitably have a considerable, direct influence on national policies and the overall political orientation of government. Blending theory suggests that selective projection from the two input spaces yields an image which is inconsistent with our understanding of the source space – two people whose presence is likely to cause a ship to list to one side – but that the web of underlying connections allow us to draw inferences from the blend nonetheless. When we encounter sentence [(3)], we easily infer that the strong shift towards conservatism may lead to political instability (1999: 110).

Grady et al. treat the nation-as-state example as a metaphorical blend (that is, as a *blend* rather than as a metaphor), which incorporates a number of “basic” metaphors, such as

ACTION IS SELF-PROPELLED MOTION, COURSES OF ACTION ARE PATHS, TIME IS MOTION, A SOCIAL RELATIONSHIP IS PHYSICAL PROXIMITY (e.g., within a single sailing vessel), CIRCUMSTANCES ARE WEATHER, or STATES ARE LOCATIONS.

In contrast, Pelyvás (2002) claims that the list of the ship, which necessarily leads to a change of her course, is caused by the *weight* of the two politicians standing on the right. Under this view, (3) is to be treated as a metaphor (rather than as a blend).<sup>23</sup>

---

<sup>23</sup> Besides suggesting the idea that conceptual blending is sometimes inadequate to explain particular examples, Pelyvás' article has significant observations about the relation between metaphor and blending. This will be discussed in Section 4.4.

## CHAPTER 3

### METAPHOR: AN OVERVIEW

The chapter discusses key aspects of metaphor, ‘literal meaning’ and the relation between the two. This is important in order to better understand the basic philosophy behind the hybrid model of this mode of thought which is proposed in Chapter 5. The discussion in this part shows why ‘literal meaning’ is not a straightforward term/concept in explaining metaphor and irony, and, consequently, why it will be discarded from the explications of both the hybrid model of metaphor and the blending discussion of irony in Chapters 5 and 7, respectively. Furthermore, the critical evaluation of the most significant metaphor theories will show that searching for alternative modes of explanation (like the one proposed in Chapter 5) could be a necessary and promising area of research.

#### 3.1 Introduction

Metaphoric language involves reference to one domain of experience known as the ‘target’ or ‘tenor’, with vocabulary commonly used to refer to another domain of experience, known as the ‘source’ or ‘vehicle’. For example, understanding the metaphor “*He attacked every weak point in my argument*” involves recruitment of an analogy between the source domain of ‘war’ and the target domain of ‘argument’. In this example, military attack, for instance, maps onto verbal ‘aggression’ and vulnerable military assets to weak points in the argument.

Although metaphor is most often discussed in literary venues, linguists have also shown that it is pervasive in everyday parlance. Average speakers use metaphors to talk about a wide range of topics, including abstract concepts such as ‘time’ and ‘progress’, emotions such as ‘anger’ and ‘love’, and taboo topics such as ‘sex’ and ‘death’ (Kövecses 1990, 2000; Lakoff 1987; Lakoff and Johnson 1980; Turner 1987). Metaphor is a fundamental means of extending word meanings, and is a basic factor affecting the way that languages change over time. For example, ‘desktop’ (originally meaning ‘the top of a desk’) came to mean in computer science “the primary display screen of a graphical user interface, on which various icons represent files, groups of files, programs, etc., which can be moved, accessed, added to, put away, or thrown away in ways analogous to the handling of file folders, documents, notes, etc., on a real desk.” (Thefreedictionary, n.d.).<sup>24</sup>

---

<sup>24</sup> For more discussion concerning the relation between metaphor and semantic change, see Coulson and Matlock (2001), Sweetser (1990a,b), or Verena (2000).

According to Pollio et al. (1977), an average speaker utters 4.08 “frozen” (or dead) metaphors (entrenched expressions that speakers no longer recognise as metaphoric, for example ‘table leg’), and 1.8 novel metaphors per minute of discourse. As Glucksberg (1989) calculates, if we assume that people engage in conversation an average of two hours a day, a person would use 4.7 million novel metaphors and 21.4 million frozen metaphors over a 60-year life span. Furthermore, in a different study focusing on the use of metaphor in television debates and news commentary programmes, Graesser et al. (1989) show that speakers use one unique metaphor for every 25 words. These numbers indicate that metaphor is a pervasive tool in the way people think and communicate (cf. Deignan 2005; Semino 2008).

### 3.2 The Development of a Concept: What is Metaphor?

#### 3.2.1 Introduction

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’,<sup>25</sup> 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”.

#### 3.2.2 General Issues in the Study of Metaphor

The literature on metaphor is enormous and growing rapidly. Therefore, the principle that guides a general overview of this phenomenon depends very much on the purpose(s) of discussion: (the development of) metaphor can be reviewed, for instance, from a *diachronic* perspective in an interdisciplinary environment, from ancient philosophers to contemporary

---

<sup>25</sup> As Deignan suggests, “A = B metaphors, such as Man is a wolf, the type used to illustrate many theoretical studies, are in fact atypical of language in use” (2006: 108). However, metaphors of this type are quite frequent subjects of semantic analysis. In spite of this, in Chapters 5 and 8 the dissertation analyses metaphors whose surface structures differ from the A = B model.

neural scientists. Metaphor can also be discussed from a *synchronic* standpoint relating to the study of this phenomenon across areas like philosophy, arts, linguistics, psychological and neural sciences at only one particular point in its history. However, the interest which motivates the overview of metaphor in this chapter, and which best serves the purposes of this dissertation concerns the following topics and perspectives: a) the existence – non-existence of metaphor, b) literal meaning, c) the relation between literal meaning and metaphor, and d) models that specifically explain the processing mechanisms of metaphor. Let us consider each of these in turn.

### 3.2.2.1 The Existence/Non-existence of Metaphor

The early modern philosopher and pivotal political theorist Thomas Hobbes adopted a dismissive attitude towards metaphor (cf. Chilton 1996). As Hobbes (1651) writes, “Metaphors, and senseless and ambiguous words, are like *ignes fatui*;<sup>26</sup> and reasoning upon them, is wandering amongst innumerable absurdities; and their end, contention, and sedition, or contempt” (Hobbes, *Leviathan*, ch. v, original emphasis, while the footnote explanation is added).

In the same empiricist tradition, Locke (1689) shows the same contempt for figurative speech, which he considers a tool of rhetoric and an enemy of truth:

... if we would speak of things as they are, we must allow that all the art of rhetoric, besides order and clearness; all the artificial and figurative application of words eloquence hath invented, are for nothing else but to insinuate wrong ideas, move the passions, and thereby mislead the judgment; and so indeed are perfect cheats: and therefore, however laudable or allowable oratory may render them in harangues and popular addresses, they are certainly, in all discourses that pretend to inform or instruct, wholly to be avoided; and where truth and knowledge are concerned, cannot but be thought a great fault, either of the language or person that makes use of them.... It is evident how much men love to deceive and be deceived, since rhetoric, that powerful instrument of error and deceit, has its established professors, is publicly taught, and has always been had in great reputation (Locke, *An Essay Concerning Human Understanding*, Bk. III, ch. x).

---

<sup>26</sup> The term ‘*ignes fatui*’ refers to “a phosphorescent light that hovers or flits over swampy ground at night, possibly caused by spontaneous combustion of gases emitted by rotting organic matter” (Thefreedictionary, n.d.). Hobbes (1651) uses this term (metaphorically) to mean (something like) ‘an illusion’.

As Lakoff and Johnson (1980) argue, the fear of metaphor in the empiricist tradition is a fear of subjectivism, emotion and imagination. Words are considered as having “proper senses”, in terms of which truths can be expressed. The metaphorical use of words is an “improper” exercise leading the language user away from the truth and towards illusion. In line with the empiricist view, Samuel Parker (1666), an English bishop with a deep philosophical vein, expressed his distrust and fear of metaphor:

All those Theories in Philosophy which are expressed only in metaphorical Termes, are not real Truths, but the meer products of Imagination, dress'd up (like Childrens babies) in a few spangled empty words.... Thus their wanton and luxuriant fancies climbing up into the Bed of Reason, do not only defile it by unchaste and illegitimate Embraces, but instead of real conceptions and notices of Things, impregnate the mind with nothing but Ayerie and Subventaneous Phantasmes (Parker, *A Free and Impartial Censure of the Platonick Philosophie*).

The development of science and technology and the Industrial Revolution triggered the development of the Romantic tradition. Poets, artists and occasionally philosophers considered poetry, art and a return to nature as a means for man to recover his lost humanity. The major English Romantic poet William Wordsworth and his friend Samuel Taylor Coleridge, who was also a literary critic and philosopher, left science, reason and objectivity to the dehumanised empiricists. They considered imagination as a humane means of achieving a higher truth, emotion as a natural guide to self-understanding, and art and poetry as the spontaneous overflow of powerful feelings. Consider the following metaphorical example in Coleridge's *The Rime of the Ancient Mariner*:

(4) And every tongue, through utter drought,  
Was withered at the root;  
We could not speak, no more than if  
We had been choked with soot.

The metaphor in (4) refers to the unfortunate and desperate situation in which the Mariner and his ship's crew suffer from thirst. This is revenge for the Mariner's killing of a bird (the Albatross) that was initially considered a 'good omen' for the voyage of his ship. In this example, Coleridge uses the picture of a 'withering flower', which, though not mentioned



explicitly in the text, is related to an organic part of the human body, the tongue: for lack of enough water (moisture), the root of a flower might become dry, resulting in the withering of the plant. In the metaphorical understanding of (4), the human tongue, which has also got a root, does not function properly (i.e., one cannot speak) if the human is deprived of the necessary water (drink, moisture) for a relatively long period of time (cf. Hácová 2004).

The Romantic tradition embraced subjectivism, which has carved out a domain for itself in art and religion. Many people in this culture consider subjectivism as a retreat for the emotions and the imagination. Therefore, Romanticists considerably contributed to viewing metaphor as an existing and real phenomenon, especially in the fields of literature. Thus, classical authors established the ground and ploughed the field for literary considerations, and for more recent linguistic and conceptual investigations of metaphor (cf. Lakoff and Johnson 1980).<sup>27</sup>

In contrast to Hobbes, Locke and the objectivists, this dissertation acknowledges the existence (and relevance) of metaphor. This view, at least, legitimises (raising) the problems and topics that will be put in perspective in the following chapters.

### **3.2.2.2 Literal Meaning**

Even in most contemporary academic analyses, metaphor and irony are mostly examined and defined in comparison to literal meaning, which is assumed to be the primary and default product of language comprehension. That is, in psycholinguistic terms, the human language processor is designed for the (primary) analysis of literal meaning. However, there has been a tremendous debate about what constitutes that meaning, if such a category (as ‘literal meaning’) exists at all.

The traditional view of literal meaning stems from Frege’s ([1892] 1966) principle of compositionality. Under this view, all sentences have literal meanings that are entirely determined by the meanings of their component words (or morphemes) and the syntactic rules according to which these elements are combined. Frege also argues that a competent language user understands a large number of sentences of a natural language without knowing who said the sentence, where it was said, when or why. That is, the understanding of many sentences is independent of knowledge of extra-linguistic context.

Frege’s view of literal meaning has a set of assumptions: first, it suggests that the literal meaning of a sentence may be defective or ill-specified, such as with nonsense sentences. In

---

<sup>27</sup> For a short history of philosophical thought on metaphor, see also Johnson (1981) and Kittay (1987).

addition, the literal meaning of a sentence should be distinguished from what the speaker means by use of the sentence, since the speaker's utterance may depart from the literal sentence in a variety of ways, as in metaphor, irony, idioms and indirect speech acts (Searle 1975).

Another assumption of the traditional view of literal meaning is that for sentences in the indicative, the literal meaning of a sentence determines a set of conditions which, if satisfied, will make the sentence a true statement. According to some philosophical accounts (cf. Carnap 1956; Lewis 1972), to know the meaning of a sentence is to know its truth conditions.

Although the traditional view of literal meaning is not a theory per se, it provides a number of assumptions that underlie research in semantics and pragmatics. Katz and Fodor (1963), for instance, presented their semantic theory within a model of generative grammar, in which they argue that 'semantic competence' is what an ideal language user would know about the meaning of a sentence without any information about its context. That is, the meaning of a sentence is its interpretation in a "null context".

One of the first researchers who argued against the traditional view of literal meaning was Searle (1979b), who claimed that literal meaning could only be determined relative to a set of background assumptions.<sup>28</sup> Searle suggested that the literal meaning of the sentence "*The cat is on the mat*", for instance, does not have a clear application unless further assumptions are made; namely, that the cat and the mat are not floating freely in outer space, and that gravitational forces exist. It is only through these kinds of background assumptions that we can determine the literal meaning of a sentence.

More recently, Gibbs (1994b) identified a number of different definitions of literal meaning:

- Conventional literality
- Nonmetaphorical literality
- Truth-conditional literality
- Context-independent literality

Before considering each of these in turn, it should be noted that the first three of the above approaches had already been suggested in Lakoff (1986), where he also discussed 'subject-matter literality'. This approach refers to language which is conventionally/usually used to talk about a particular domain of subject matter. Under this view, the (metaphorical) utterance "*Joe*

---

<sup>28</sup> Note that Searle was indecisive as to whether it was possible to specify (all) the background assumptions (of a sentence) or not. In Searle (1979b) he argues that although the potential difficulties in specifying the set of background assumptions are great, there is no theoretical reason to suggest that it cannot be done. However, in a more recent study, Searle (1983) argued that it is impossible to specify *all* of the background assumptions.

*has left us*” is also literal, since it is a conventional way of talking about the subject matter of death. Perhaps because this view combines (the notion of) metaphor and literality in a single model (which can certainly be a bit confusing), it has largely been neglected in the literature on literal meaning.<sup>29</sup> Now, let us consider the models of literal meaning that are identified in Gibbs (1994b).

In ‘conventional literality’, literal usage is contrasted with the poetic use of language, exaggeration, embellishment and indirectness. According to this view, literal meaning is the conventional, ordinary, or everyday way of talking about the world around us, while figurative meaning is an “exotic” form of expression which only concerns creative writers (cf. Recanati 2004). This conception of literal meaning holds that most ordinary language is literal. However, on closer inspection, much of our everyday language turns out to be figurative in nature. Consider the following examples, taken from Evans and Green (2006):

- (5) Things are going smoothly in the operating theatre.
- (6) He was in a state of shock after the election result.
- (7) The economy is going from bad to worse.

These sentences express ideas about operations, emotional or psychological states and changes in the economy in an everyday (ordinary) fashion. However, each sentence makes use of language that relates to motion, physical location or change in location in order to describe non-physical entities. In sentence (5), although operations are not moving entities, they can be interpreted, for example, in relation to sailing boats that can go smoothly across a lake or an ocean. In example (6), while we can be physically located within bounded landmarks like rooms or buildings, we cannot be literally located within a state of shock, since shock is not a physical entity. Finally, in sentence (7) a change of state is understood in terms of a physical change in location.

Although the sentences in (5)–(7) represent conventional means of talking about events, states and changes, the ideas they express are based upon “non-literal” associations. This observation presents a serious challenge for the view that “literal” language provides the conventional means for talking about everyday events and situations (cf. Evans and Green 2006).

---

<sup>29</sup> ‘Subject-matter literality’ is (at least) made mention of, for example, in Coulson (2005b), Gibbs (1993, 2005b), Gibbs and Colston (2006), and Steen (2005).

Another view of literality identified by Gibbs (1994b) is ‘nonmetaphorical literality’. Under this conception, literal language expresses meaning in a direct way, without (having to have) recourse to metaphor. That is, language, in which one word (concept) is never understood in terms of another word (or concept), is directly meaningful.<sup>30</sup> Language users should always be able to express their “true” meaning without relying on metaphorical language, which involves expressing one idea in terms of another. Consider the following examples:

(8) Achilles is brave.

(9) Achilles is a lion.

While (8) expresses the idea that Achilles is brave in a literal way, (9) conveys the same thought in a metaphor: Achilles has some quality understood as typical of lions, such as ‘fearlessness’.

However, as argued in Evans and Green (2006), there are certain concepts that are difficult to explain in non-metaphorical terms. For example, talking about ‘time’ is not easy without recourse to expressions relating to ‘space’ or ‘motion’, as in the following examples:

(10) Christmas is approaching.

(11) Christmas is not very far away.

While (10) relies upon language relating to ‘motion’, the understanding of (11) is based upon (the notion of) ‘space’ to express the idea that Christmas is imminent (cf. Lakoff 1987). These expressions represent everyday, ordinary ways of talking about ‘time’.

Evans and Green (2006) argue that temporal concepts seem difficult to describe without using metaphorical language (see also Evans 2004). Furthermore, if certain concepts are (wholly, or in part) understood in metaphorical terms, then the non-metaphorical definition of literality entails that concepts like ‘Christmas’ or ‘time’ (somehow) lack meaning in their own right. Indeed, many everyday concepts appear to be understood in metaphorical terms, as in the following examples:

---

<sup>30</sup> The idea of the nonmetaphorical conception of literality, that language is ‘directly meaningful’ is in line with Gibbs’ (1994b) ‘direct access view’, in which he claims that individuals immediately understand the intended meanings of both literal and nonliteral discourse. He showed, for example, that metaphoric utterances take no longer to process than literal ones (see Gibbs 2002). This suggests that no prior representation of the literal meaning is necessary when understanding irony. See more on the relation between metaphor and literal meaning in Section 3.2.2.3.

(12) He exploded with anger.

(13) Peter defended himself against my claims.

The statement in (12) refers to the state of being angry with the help of a metaphor in which ‘anger’ is seen as pressure, heat and force. In (13), (Peter’s) argumentation is understood/described in terms which might just as well be applied to war (cf. Kövecses 1995, 2000, 2002; Lakoff 1993; Lakoff and Johnson 1980).

As the above examples demonstrate, the non-metaphorical definition of literality is contrary to fact, since language users quite often express themselves in metaphorical terms.

The truth-conditional view of literality rests upon the assumption that the basic function of language is to describe an objective external reality, and that the relationship between language and the world can be modelled in terms of truth or falsity (cf. Evans and Green 2006). This approach suggests that an important function of language is to describe states of affairs. Consider (14) below:

(14) It’s raining in London.

According to the truth-conditional definition of literality, example (14) is literal language because it can either be true or false of a given situation. However, a great number of linguistic expressions do not describe situations at all. Therefore, they cannot be meaningfully evaluated as true or false, as in the following example, taken from Evans and Green (2006):

(15) I now pronounce you man and wife.

As explained by Evans and Green, the function of (15) is not to describe a situation but to change some aspect of the world: the verbal element ‘pronounce’ is essentially the ‘author’ or ‘speaker’ performing an action, a particular speech act (cf. Austin 1962). This example shows that the truth-conditional view of literality, which rests upon the idea of ‘literal truth’, has trouble explaining examples like (15): they are neither literal nor figurative, since they cannot be evaluated as true (or false) with respect to a given situation.

Finally, according to the truth-conditional view, literal meaning is context-independent. In other words, it is not necessary to have (any) knowledge about the context in order to have a full interpretation of (an utterance’s) literal meaning. Consider (16) below:

(16) The cat sat on the mat.

Under the truth-conditional view, (16) is fully interpretable independent of any context, and the meaning that is retrieved from this utterance is literal. However, according to the encyclopaedic view of meaning, which is assumed by cognitive semantics, sentences like (16) are not context-independent, since they are interpreted against the background of rich encyclopaedic knowledge. That is, cultural associations, for instance, influence what kind of cat we have in mind. Furthermore, our experience of the world entails the assumption that gravity and normal force-dynamics apply so that we do not envisage the cat in (16) on a flying carpet (Evans and Green 2006).

The above discussion illustrates that it can be difficult to identify the fully context-independent aspects of meaning. Therefore, the context-independent view of literality cannot be considered a reliable and complete approach. In support of this idea, it should be noted that a number of researchers take the contextualist view in their discussions of literal meaning. Recanati (2004), for example, discusses a spectrum of views from “Literalism” to “Contextualism” – two mainstream and dominant approaches within contemporary theorizing. According to Literalism, natural language sentences may legitimately be ascribed truth-conditional content, quite independently of what the speaker of the sentence actually means.

Contextualism, on the other hand, holds that content is primarily borne by speech acts. That is, as Recanati claims, “only in the context of a speech act does a sentence express a determinate content” (2004: 3). The author assesses the pros and cons of various views on the literalist-contextualist spectrum, and finally endorses Contextualism. Under an extreme contextualist view, standing linguistic meaning has no context-independent core that is provided by knowledge of the language and is available to both speaker and hearer. Rather, speakers are regularly engaged in semantic improvisation and yet manage somehow to make themselves understood anyway. Recanati (2004) flirts with this extreme view but does not endorse it.

In sum, a number of definitions of ‘literality’ have been proposed in the literature. However, most of them seem problematic in one respect or another.

### **3.2.2.3 Literal Meaning and Metaphor**

One of the main topics of metaphor research is concerned with how ‘literal meaning’ plays a role in the understanding of metaphor. According to the Standard Pragmatic Model (Grice 1975,

1978; Searle 1979a)<sup>31</sup>, metaphor representation incorporates two distinct and successive phases: metaphorical meanings are accessed only after the literal meaning has been rejected. A somewhat different view is presented by Giora and Fein (1999). They argue that only the understanding of novel (i.e. less-familiar) metaphors incorporates the initial activation of the literal meaning.<sup>32</sup> That is, sequential processing occurs (only) when language is used innovatively, as in (17) below:

(17a) My husband is terribly annoyed by his new boss. Every day he comes home even more depressed than he had been the day before. Somehow, he cannot adjust himself to the new situation.

(17b) Their bone density is not like ours.

On the other hand, Giora and Fein claim that the representation of *familiar* metaphors incorporates the “equal” (simultaneous) activation of metaphoric and literal meanings.<sup>33</sup> To illustrate, the understanding of ‘step on somebody’s toes’ presupposes the initial involvement of both the ‘foot’ and ‘offend’ concepts.

Giora and Fein’s (1999) reasoning about the role of literal meaning in the representation of the above metaphors is based upon Giora’s Graded Salience Hypothesis (see also Giora 1997, 1999, 2003a, 2004; Giora et al. 1998; Peleg 2002; Peleg et al. 2001). According to this theory, expressions do encode salient meanings – meanings that are coded in the mental lexicon. The degree of salience of a meaning of a word or an expression is a function of its conventionality (e.g., Gibbs 1980, 1982), familiarity (e.g., Blasko and Connine 1993; Turner and Katz 1997) or frequency (e.g., Hogaboam and Perfetti 1975; Neill et al. 1988). Under the Graded Salience Hypothesis, an expression’s salient meaning is always accessed initially, regardless of contextual information or bias. Therefore, the representation of the unfamiliar bone density metaphor in (17b) incorporates only the salient literal meaning initially. The understanding of the familiar metaphor ‘step on somebody’s toes’, however, involves the initial activation of *both* the literal and figurative meanings, since they are both viewed as salient in Giora’s (1999) explanation.

<sup>31</sup> It should be noted that Grice (1975, 1978) and Searle (1979a) were not concerned with how utterances are actually processed. They aimed at explaining how utterances could, in principle, enable successful communication.

<sup>32</sup> Blasko and Connine (1993), however, show that even the figurative meaning of non-familiar metaphors is directly available, if the metaphors are apt (i.e. “good” or, in other terms “readily interpretable”).

<sup>33</sup> Note, however, that Giora does not make any clear predictions as to the ‘equal activation of literal and figurative meanings’.

A number of researchers, however, are critical of theories that assume that listeners/readers must first analyse the literal meanings of utterances *before* applying pragmatic information to derive what speakers implicate. They contradict the Standard Pragmatic Model (and also in part Giora's theory), and claim that people often appear to *directly* understand what speakers intend to communicate when using metaphors. That is, there is no need to process the literal meanings of speakers' (metaphoric) utterances *in advance*. One of the most influential advocates of this conception is Raymond Gibbs, who has proposed this idea in his 'direct access view' (Gibbs 1994a,b, 2001, 2002).<sup>34</sup>

More recent brain investigations are also divided as to whether literal meaning plays a role in metaphor comprehension or not. Arzouan et al. (2007), for example, examined the representation of unfamiliar metaphors. They compared the patterns of brain electrical activity elicited by processing two-word expressions denoting literal, conventional metaphoric and novel metaphoric meanings, as well as unrelated word pairs. The participants were asked to perform a semantic judgement task in which they decided whether each word pair conveyed a meaningful expression. Arzouan et al. (2007) found similarities in the representations of novel metaphors and unrelated word pairs: in both, similar electrical wave patterns indicated processing difficulties at a particular point, 400 ms after stimulus presentation (that is, 400 ms after the experimental item, which the participants were supposed to read and evaluate, appeared on a screen/monitor).<sup>35</sup> This was interpreted as the difficulty that participants had in retrieving the literal meaning during the representation of both types of experimental stimuli (novel metaphors and unrelated word pairs). According to Arzouan et al., this similarity constitutes evidence for sequential (literal then figurative) processing in unfamiliar metaphors.

However, quite a few neural studies have questioned the predominance of literal meaning over the figurative one in metaphor representation. These investigations prove that the metaphoric meaning emerges in a rather automatic and direct fashion – without the prior computation of the literal meaning. Tartter et al. (2002), for example, suggest that novel metaphors appear anomalous at around 200 ms after stimulus presentation, where syntactic processes are suggested to be in operation. However, at 400 ms, where lexical-semantic processes are claimed to work, the experimental participants were seen to derive a plausible figurative interpretation<sup>36</sup> – as opposed to Arzouan et al. (2007), where 400 ms after stimulus onset the subjects in the experiment still had difficulty arriving at the figurative meaning.

---

<sup>34</sup> For assumptions similar to those proposed in Gibbs' direct access approach, see Glucksberg (2003), McElree and Nordlie (1999), Pynte et al. (1996), Sperber and Wilson ([1986] 1995), Wolff and Gentner (2000).

<sup>35</sup> In ERP (event-related potential) measures the brain wave pattern 400 ms after stimulus onset is referred to as the N400 (attribute). A more detailed description of ERPs and the N400 amplitude will be presented in Chapter 9.

<sup>36</sup> In support of the direct access view of figurative meaning, see also Iakimova et al. (2005).



Finally, some brain investigations show support for *both* the direct and the indirect access views of metaphor representation. Lai et al. (2009), for example, evaluated brain waves 400 ms after stimulus onset while their experimental subjects were involved in “sensicality judgement tasks”<sup>37</sup> of anomalous, novel metaphorical, conventional metaphorical and literal sentences. Lai et al. (2009) found that the conventional metaphor and the literal conditions differed in their (brain wave) amplitude patterns, indicating a difference in processing effort. This variation could be interpreted in two ways: the conventional metaphorical sentences were “difficult” (to process) because, in line with the indirect access view, the “system” was busy rejecting the first available literal meaning and (then) retrieving the appropriate metaphorical interpretation.

Under another explanation of the results, however, during the understanding process, the system was selecting among multiple meanings that were all retrieved at the same time. This interpretation would be consistent with the direct access view.<sup>38</sup>

One of the most fundamental shortcomings of the investigations about the relation between metaphorical and literal meanings is that the researchers do not define ‘literal meaning’ in their scholarly discussions; it is usually taken for granted (rather than explicitly argued for). Furthermore, not only literal meaning but also (the notion of) metaphor remains undefined in those academic discussions. They mostly incorporate ‘goodness-of-example’ ratings as an initial step, where the subjects in the experiments have to decide what counts as a ‘good’ (example of) metaphor. The experimental items are chosen on the basis of these measures. This mode of (item) selection is, however, ‘folk theoretical’ rather than academic in nature: it is based upon people’s intuitions and experience, rather than on a scholarly explanation of metaphor. Neglecting well-established definitions in item selection and performing (preliminary) goodness-of-example ratings instead can, however, cause that experimental subjects mistakenly judge particular examples to be metaphorical. In other words, making decisions on metaphor aptness on the basis of personal intuitions and experience excludes the mere possibility that standard (metaphoric) examples for those brain investigations could be selected according to firm, straightforward and general principles. Although misjudging potential experimental items is certainly possible, there *are* figurative statements in the metaphor literature (e.g., “*This surgeon is a butcher*”) that are regarded, mistakenly in my view, as metaphors across the board. More details on the misinterpretation of the surgeon-as-butcher example (as a metaphorical expression) will be presented later in this chapter.

---

<sup>37</sup> In ‘sensicality judgement tasks’ the experimental participants have to decide whether the items which have been presented to them (usually on a screen/monitor) make sense or not.

<sup>38</sup> Note, however, that according to Lai et al. (2009), the comparison of brain wave patterns associated with novel and conventional *metaphors* supports the direct access model.

The dissertation is not concerned with ‘literal meaning’ in any of the senses discussed in the previous section. Partly because defining that meaning is a challenging exercise, but most importantly because in its discussion of metaphors the dissertation primarily focuses on conceptual domains (of experience), which are evoked by words in particular metaphorical contexts.

### 3.2.3 Theories of Metaphor

The literature abounds with various metaphor models and proposals. However, the large number of theories and limitation of space preclude discussing all of them in this dissertation. Therefore, brief discussions of only the most relevant and prominent models will be presented here.

According to one of the simplest models of metaphorical representation (cf. Davidson 1978), a metaphor merely juxtaposes the topic (target) with another object, event or situation (source), and thereby causes the hearer<sup>39</sup> to notice surprising attributes of the target. Consider the following examples:

(18) Juliet is the sun.

(19) The sun blazes bright today; the clouds flee from his mighty beams (describing Achilles as he rages upon the battlefield).

As Camp (2006) argues, although the juxtaposition view of metaphor is appealingly minimal, it suffers from the fundamental flaw of being too accommodating. Example (18), which is in all probability an utterance of praise, might remind the hearer of a pleasant sunny day on the beach. This association might lead the hearer to notice that Juliet’s eyes are the colour of the sea on that particular day. According to Camp, the juxtaposition treatment of (18) presupposes a mere idiosyncratic association, “not appropriately related to the project of thinking of Juliet *as the sun*” (2006: 162). Another problem with Davidson’s juxtaposition view of metaphor is that it cannot explain how metaphors manage to do more than simply “nudge us into noting” (1978: 38) already known but neglected features. Camp states that the representation of (19) does not just involve the reconfiguration of already existing knowledge about Achilles, as

---

<sup>39</sup> Since the discussion in this dissertation primarily focuses on spoken language understanding, the term ‘hearer’ is used to refer to the ‘conceptualiser’/‘comprehender’ of some verbal input. Therefore, the expressions ‘hearer’, ‘conceptualiser’ and ‘comprehender’ will be used interchangeably throughout the dissertation.

Davidson claims. Rather, the assertion in (19) contains new information: Achilles is fighting with great energy and force.<sup>40</sup>

In more general terms, Davidson was the philosopher who had perhaps made the most influential objection to semantic treatments of metaphor (cf. Arseneault 2006). According to Davidson (1978), all semantic accounts of metaphor suffer from the fundamental error of reading the contents of the thoughts induced by the metaphor into the content of the expression itself. He objects to the idea that the concept of ‘metaphorical meaning’ is required to explain how metaphor achieves its effect. For Davidson, metaphorical meaning does not exist, “only literal meaning has genuine explanatory power” (Arseneault 2006: 42). If there is no metaphorical meaning, then what metaphor theories can do is tell us about the effects that metaphors have on comprehenders. Those models, however, do not provide a method for decoding a special content conveyed by the metaphorical expression.

Returning to the discussion in which two basic shortcomings of the juxtaposition view of metaphor were outlined, Camp (2006) argues that category-transfer models solve the first problem (the excessively accommodating nature of the theory) by limiting the range of relevant features to those that are grounded in our characterisation of the source. As an example, consider Goodman (1968: 72), who asserts that in metaphor “a label along with others constituting a schema is in effect detached from the home realm of that schema and applied for the sorting and organising of an alien realm”. However, as Camp argues, Goodman’s conception of metaphor does not explain how a schema can organise an “alien” realm to which it cannot literally apply. According to Goodman, “a metaphor is an affair between a predicate with a past and an object that yields while protesting” (1968: 69). However, he does not provide any specification of what “yielding” and “protesting” amount to.

Glucksberg and Keysar (1993) offered a cognitive, category-model of metaphor that dispensed with Goodman’s resolute nominalism. On their view, metaphorical representation and thought incorporated forming an ‘ad hoc’ category from the metaphorical source by abstracting from a prototypical example of the literally denoted category:

(20) My job is a jail.

According to Glucksberg and Keysar, understanding (20) requires the comprehender to abstract away from specific, concrete features of jails, and to produce a general schema which includes being involuntary, confining, unpleasant, punishing, unrewarding, and so on. This category-

---

<sup>40</sup> See Leddy (1983), Farrell (1987) and Scholz (1993) for criticisms of Davidson’s view of metaphor, and Crosthwaite (1985) for a defence of Davidson’s account.

transfer model also has a solution to the problem of informativeness: by classifying the target within the generated category, the metaphor prompts us to add any missing features of that category to our characterisation of the target (cf. Camp 2006).

Category-transfer models focus on the entire complex schema which is associated with the source. Therefore, according to Camp, they nicely explain the global organisational effect that is such a fundamental part of metaphorical comprehension. As Goodman argues, in metaphor not just an isolated term but “a whole apparatus of organisation, takes over new territory” (1968: 73). In accordance with this idea, Glucksberg and Keysar state that metaphors present “a patterned complex of properties in one chunk” (1993: 420).

However, these models focus exclusively on the schema which is associated with the *source*. Therefore, they have a hard time explaining the very different effects that can be produced by applying the same vehicle to different tenors. When we think of Juliet as the sun, for instance, is most probably different than when we think of Achilles as the sun. A solution to this problem could be to assign a filter or selectional role to the target: only those elements and aspects of the schema are transferred which capture dimensions along which one might significantly and relevantly classify that target.<sup>41</sup> This helps, but the target can only filter out those elements that are already generated by abstraction from the source. Therefore, category-transfer models face the same problem as the juxtaposition theories, since the schema must be encompassing and sufficiently general to apply to *any* possible target. For example, the abstracted schema for ‘the sun’ must incorporate all the relevant features that can be applied/related/mapped not only to Juliet or Achilles, but also to Louis XIV, Richard III, an atomic bomb, the nucleus, and so on (cf. Camp 2006).

A solution regarding the ‘excessively inclusive target’ could be making the general schema sensitive to the current context (cf. Stern 2000). But even this does not solve the problem altogether, since the same metaphorical source can be applied to quite different targets within a single context, as in (21) below:

(21) Juliet and Achilles are both suns in their own ways.

As Stern (2000: 1) argues, the metaphorical interpretation of (21) incorporates the ideas that: a) “Juliet is exemplary and peerless, and/or that she is worthy of worship and adoration, and/or

---

<sup>41</sup> This is compatible with Lakoff’s (1990) Invariance Principle which states that in metaphorical mappings only those aspects of the source can be mapped that do not conflict with the schematic structure of the target. For more on the Invariance Principle, see Section 4.2.

that he [the speaker who is praising Juliet] cannot live without her nourishing attention”, and b) Achilles (a hero in Homer’s *Iliad*) is a skilled and ferocious Greek warrior.

Finally, because the schema is generated by abstraction, the model has a difficult time explaining the concrete properties that metaphors can invoke. As an example, the metaphor “*My job is a jail*” could implicate, for instance, that a person is required to share a small cubicle with someone he does not like, or that he eats tasteless food dished out by surly staff. These features of the target are also features of the source. In this case, however, it should be committed to predicting that they will also apply when someone (metaphorically) says (22) below:

(22) My marriage is a jail.

Elements like ‘sharing a small place with an ‘unloving’/‘unloved’ spouse’, or ‘being provided with tasteless food by a dour wife’ are also possible features of the target (marriage), and so they should not be filtered out in principle. But in a relatively similar pair of contexts in which the hearers are equally ignorant about the speaker’s marriage and job, the elements of ‘sharing a small cubicle’ and ‘eating tasteless food’ might well be included in the metaphorical effects of “*My job is a jail*” but not of (22) (cf. Camp 2006).

Rather than focusing exclusively on the schema associated with the source, and assigning the target at most a filtering role, ‘feature-matching’ models (e.g., Ortony 1979; Fogelin 1988) suggest direct comparison of source and target schema attributes. As a result, those theories nicely explain why the same source can have different metaphorical effects when applied to distinct targets, and how metaphors can highlight very specific features of the target. Feature-matching models also echo the classical intuition that metaphors crucially involve comparison.<sup>42</sup> In order to avoid being vacuous, they exploit Tversky’s (1977) salience-based theory of similarity: the extent to which two entities count as similar in a given context is determined by a weighed function of their shared salient features minus a weighed function of their distinctive salient features. A given feature’s ‘salience’ is understood as a function of its ‘intensity’ and its ‘diagnosticity’ in that particular context. According to Tversky, intensity refers to

---

<sup>42</sup> As Cicero writes, “a metaphor is a brief similitude contracted into a single word” (Cicero, *De Oratore*, Bk. III, ch. xxxix). In a similar fashion, Quintilian holds that “metaphor is a shorter form of simile” (Quintilian, *Institutio Oratoria*, Bk. VIII, ch. vi).

factors that increase intensity or signal-to-noise ratio, such as the brightness of a light, the loudness of a tone, the saturation of a color, the frequency of an item, the clarity of a picture or the vividness of an image (1977: 342).

Diagnosticity is concerned with how useful a feature is for classifying an object in a particular context. For example, red stripes on a snake's back might be quite intense, while the shape of its head might be more diagnostic of whether it is poisonous.

Feature-matching models face three main challenges. First, because they focus on the search for matches between individual attributes, they have a hard time accounting for metaphors' holistic organisational effects (cf. Camp 2006). Second, since they search for matches between already existing attributes in each characterisation, they, like juxtaposition theories, have a hard time explaining how metaphors manage to be informative. A shortcoming related to this problem concerns the fact that in metaphorical comparisons many salient features go unmatched. Therefore, the following question arises: by what criteria do we distinguish the features that should be included from those that should be ignored in metaphorical projections? Third, not all of the features that a metaphor makes us notice in the target have a direct match in the source. For example, the compliment "*Juliet is the sun*" is most probably a paean to Juliet's beauty. However, the sun itself is seldom considered beautiful.

The 'structural-alignment' view of metaphor (Bowdle and Gentner 2005; Gentner 1983, 1989; Gentner and Bowdle 2001; Gentner and Wolff 1997; Gentner et al. 2001) represents a hybrid model to the extent that it preserves the emphasis of category-transfer models on overall schemas and structural organisation within a comparativist framework. Gentner's Structure-Mapping Theory with its computational simulation in the structure-mapping engine (or SME, as proposed in Falkenhainer et al. 1989; Forbus, Gentner and Law 1995) assumes that metaphor representation involves two successive phases: alignment and projection. Within alignment, the comprehender identifies systematic inter-structure correspondences (global mappings, or in short gmaps) across the inputs: first, common predicates are traced and then a set of 'root gmaps' is constructed by systematically comparing the corresponding arguments of identical predicates in the source and target. As an example, in a comparison between aqueducts and blood vessels (as in "*Blood vessels are aqueducts*"), 'carry(blood)' would be matched to 'carry(water)'. Local matches are then "coalesced" into "kernels" of internally consistent structures of related matches. The kernels are in turn merged into the largest overall coherent structure which preserves the greatest number of the largest kernels. Alignments with high structural relatedness, in which higher order relations constrain lower order relations, are

preferred over less systematic sets of commonalities. This results in a complex, structured schema which is tailor-made for the particular target. Once a structurally consistent match between the source and target domains has been found, further predicates from the source that are connected to the common system can be projected to the target as candidate inferences (cf. Gentner and Bowdle 2001). According to Camp (2006), this solves the problem of informativeness. For a better illustration the structural-alignment model of metaphor, see the following example:

(23) Men are wolves.

As Gentner and Bowdle argue, during the representation of (23), first, the shared relation ‘prey on’ is aligned. Then, the non-identical arguments of this shared predicate are paired by ‘parallel connectivity’: wolves  $\rightarrow$  men and animals  $\rightarrow$  women. Finally, predicates that are unique to the source but connected to the aligned structure (i.e., those predicates specifying that the predatory behaviour is instinctive) are carried over to the target. Thus, the metaphor in (23) would be interpreted as meaning something like ‘men instinctively prey on women’.

Although the structural-alignment treatment of metaphor does contribute to our understanding of how metaphor works, it too is still limited. First, the above explanation appears to be useful in explaining the relationships in a metaphor the meaning of which is known to the researcher. However, whether such explications can really be used to predict, calculate or assess the meanings of *unknown* metaphors is doubtful. Second, as Camp (2006) argues, global reorganisation, which is a crucial element of metaphorical comprehension, is often not nearly as systematic or consistent as the structural-alignment model predicts; rather, metaphor understanding incorporates a patchwork of overlapping kernels and elements. Third, because the model places emphasis on higher-order structural matches, similar to category-transfer theories, it has a hard time explaining highly concrete features. Metaphors can attribute specific experiential properties to their targets which are neither direct projections from the source nor even projections from kernels, in which internally consistent structures of related matches are established. As an example, if a wine’s taste is described as ‘velvet, with a brocade pattern’, the metaphorical meaning refers to a first-order, sensational feature that the fabric itself does not possess (cf. Camp 2006).

An alternative (and rival) computational model to explain metaphor was proposed by Holyoak and Thagard (1989). In their model, which is generally referred to in the literature as ACME (Analogical Constraint Mapping Engine), the authors approach the structure-mapping

problem from a different perspective than SME. Although ACME also places great emphasis on the attribute of mapping ‘systematicity’, or ‘isomorphism’, it eschews the exhaustively optimal and maximal strategy pursued by SME. Instead, ACME builds a constraint network for each new analogical problem, 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 sole interpretation emerges; one that is neither guaranteed to be optimal or maximal, or, for that matter, even wholly systematic. Unlike SME, ACME guarantees *nothing*, and represents a heuristic rather than complete approach to the problem. ACME pursues what may be called a ‘natural’ or ‘evolutionary’ model of computation, in which environmental forces pressurize a system into converging toward a *good*, rather than optimal, solution to a problem (cf. Veale and Keane 1997; Veale et al. 1999, and for a similar model (CopyCat), see Hofstadter and Mitchell 1988, and Hofstadter et al. 1995).

As described in Veale et al. (1999), similar to SME, ACME is a structure matcher which compares two domain descriptions in a predicate-calculus-style representation. In Holyoak and Thagard’s (1989) model, hierarchical structure, which is originally expressed via nesting of predications, is translated into a series of inhibitory and excitatory linkages. Nodes in ACME correspond to possible entity correspondences between the source and target domains. Once the network is activated, the activation levels of the nodes gradually converge toward asymptotic values as the network proceeds through a succession of epochs before eventually ‘settling’. An ACME network is deemed to have settled when a certain large proportion of its nodes have reached their asymptote. Yet, while being neither maximal nor optimal, ACME nevertheless appears to be slower than SME (cf. Veale and Keane 1997), and is certainly less systematic.<sup>43</sup>

Another computational approach to explain metaphor is the so-called Sapper model (Veale and Keane 1992; Veale et al. 1995, 1999). It is a hybrid (symbolic-connectionist) theory which views the interpretation of novel metaphor as a process of connectionist ‘bridge-building’. From the Sapper perspective, metaphor comprehension involves the construction (or more accurately, the ‘awakening’) of new cross-domain linkages, which serve as bridges to bind the analog-pairs established by the metaphor. This computational model views semantic memory as a ‘localist graph’ in which nodes represent distinct concepts, and arcs between the nodes represent semantic (conceptual) relations between those concepts. Memory management

---

<sup>43</sup> 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).

Although ACME’s constraint network seems to be the most potent framework to explain what actually happens in metaphoric blends, it too has limitations: assuming that metaphor shapes the target to some extent, a theory that presupposes a detailed knowledge of the relationships within the *target* may miss the point of the creative force in metaphor.



under Sapper is proactive toward structure mapping. That is, it employs rules of structural similarity to determine whether any two given nodes may at some future time be placed in systematic correspondence in a metaphoric context. If so, Sapper notes this fact by laying down a ‘bridge relation’ between these nodes, to be exploited in some future structure-mapping session (Veale and Keane 1997).

The last computational model to be discussed is called Latent Semantic Analysis, which is most often referred to in the literature as LSA (Kintsch and Bowles 2002). In this model, meaning is represented geometrically, that is, mathematically, which means that this approach *calculates* with meanings.

LSA deals with sentences of the form  $\text{NOUN}_1 \text{ IS A } \text{NOUN}_2$ , where  $\text{NOUN}_1$  is called the argument (A), and  $\text{NOUN}_2$  is referred to as the predicate (P). Under this computational approach, the meanings of A and P are represented as the vectors A and P, and the meaning of the sentence “A is P” is given by the vector sum  $A + P_A$ , where  $P_A$  is the contextually modified predicate vector. Part of LSA is the so-called ‘predication algorithm’ – the process which first selects terms which are related to P, and then selects from this set those terms that are also related to A. That is, from the semantic neighbourhood of P those items are selected which are in some way relevant to A. This selection is accomplished through a spreading activation process, in which a network is constructed consisting of P and A, and the closest neighbours of P. Activation is spread in that network. Finally, the most strongly activated neighbours of P will be used to modify P, to create  $P_A$ .

Kintsch and Bowles (2002) illustrate their model with the analysis of the following metaphor:

(24) Happiness is gold.

As the authors argue, (24) is best analysed in the LSA framework if ‘gold’ is taken as the predicate, and ‘happiness’ as the argument. This network also incorporates three close neighbours of P: ‘precious’, ‘currencies’ and ‘nuggets’. Consider Figure 2 below:

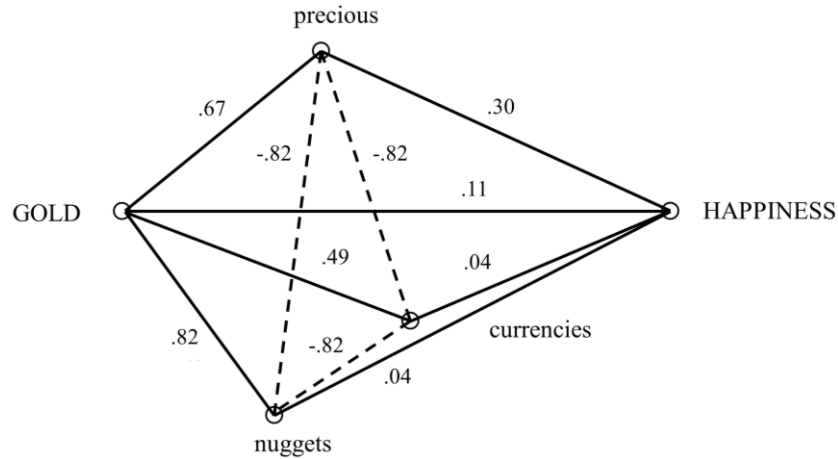


Figure 2. The LSA network for the metaphor “*Happiness is gold*”

According to Kintsch and Bowles, the positive link strengths are the cosine values between the respective items in the LSA network. Thus, as Figure 2 shows, ‘happiness’ and ‘gold’ have a  $\cos = .11$ ; that is, they are only weakly related. The neighbours of P interfere with each other; they compete for activation. As Kintsch and Bowles explain, “interference is generated by linking the three neighbours with negative links, so that the sum of the positive links equals the sum of the negative links in the network (2002: 261). According to this model, the neighbours of P with the highest cosine values with A will become activated in the net, whereas neighbours that are related to P but not to A will become deactivated. In this example, the activation of the five nodes reflects the following values (after the process has stabilised):

Gold	1.000
Precious	1.000
Currencies	0.000
Nuggets	0.048
Happiness	1.000

In the happiness-as-gold example, Kintsch and Bowles fix the activation of ‘gold’ and ‘happiness’ at the value of 1. From the three neighbours of P, ‘precious’ has the highest cosine with A. Therefore, ‘precious’ will be selected to modify P. If N is taken as the LSA vector for

‘precious’, then  $P_A = P + N$ . Therefore, (23) will be interpreted in relation to ‘value’ (cf. Kintsch 2000, 2008).<sup>44</sup>

Katz and Ferretti (2001) point out a limitation of the LSA model: the spreading activation process, which is responsible for selecting the terms in the “LSA space” that are related to both P and A, and then uses these terms to augment the vector representing the meaning of the metaphor, should consider not only semantic but also a broad range of constraints, for example syntactic ones.

Gentner and Bowdle (2001) highlight another shortcoming of the LSA approach: some metaphors are understood like analogies, that is, by structural alignment, which is a controlled, resource-demanding process. In contrast, the predication algorithm applies when sentences (metaphorical or not) are understood automatically, without requiring this kind of problem solving.

Finally, in their description of LSA, Kintsch and Bowles (2002) do not seem to adequately (and fully) explain their approach. Some questions that should be clarified are: Supposing that the use of vectors is strictly mathematical in nature, what are the *exact* (mathematical) mechanisms that underlie the operation(s) of those vectors? What is the rationale behind calculating *cosine* values in the model? How are those calculations accomplished? How exactly are the rules of trigonometry applied in LSA – especially in the discussions of the *diagrams* in the LSA literature?<sup>45</sup>

The models of metaphorical representation that have been discussed in this section are theoretically and empirically useful, since they offer relatively specific algorithms, 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.

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. This proposal will be discussed in Chapter 5.

---

<sup>44</sup> For discussion of metaphor in computational terms, see also Carbonell (1980), Fass (1991), Gerrig (1989), Hall (1989), Hobbs (1992), Indurkha (1987), Lee and Barnden (2001), Martin (1990, 1996, 2000), Mason (2004), Narayanan (1999), Russel (1976).

<sup>45</sup> It should be noted that in Figure 2 the exact mathematical procedures in which the cosine values were calculated are difficult to identify from the authors’ explanation alone.

## CHAPTER 4

### CONCEPTUAL METAPHOR THEORY

#### 4.1 Introduction

The previous chapter discussed some (general) aspects of metaphor. In this one, the most influential metaphor model (Conceptual Metaphor Theory – CMT for short) will be outlined. The explanation of CMT in a separate chapter is reasonable since the hybrid model of metaphor that the dissertation proposes in Chapter 5 largely builds upon this framework.

This chapter also aligns CMT and Blending Theory. A comparison of the two models will play a significant part in contrasting the blend-based models of metaphor and irony in Chapter 8.

#### 4.2 Conceptual Metaphor Theory

Conceptual Metaphor Theory (CMT), which is one of the earliest and most important models to take a cognitive semantic approach, was first proposed by Lakoff and Johnson (1980). According to Danesi (2004), the theory traces its roots to the ideas of the English literary critic and rhetorician Ivor Armstrong Richards, who suggested that metaphor resulted from an association of concepts, rather than of single words (Richards 1936).

The basic premise of CMT is that metaphor is not simply a stylistic feature of language, but that thought itself is fundamentally metaphorical in nature. As Lakoff and Johnson argue, “metaphor is primarily a matter of thought and action and only derivatively a matter of language” (1980: 153). According to CMT, conceptual structure is organised by ‘cross domain mappings’ (correspondences) which inhere in long term memory. Some of these mappings are due to pre-conceptual embodied experiences while others build on these experiences in order to form more complex conceptual structures. As an example, we can think and talk about QUALITY in terms of VERTICAL ELEVATION.<sup>46</sup> Consider (25) below:

(25) She got a really high mark in the test.

In this example, ‘high’ does not literally relate to physical height but to a good mark. As the CMT framework explains, the representation of (25) presupposes the idea that the conceptual

---

<sup>46</sup> In the CMT literature conceptual domains are generally indicated by words in capital letters. This dissertation aims to adhere to this tradition.

domain QUALITY is conventionally (and experientially) structured and therefore understood in terms of the conceptual domain VERTICAL ELEVATION.

An important claim of CMT is that the metaphorical expressions in ordinary language are systematic and not just one-shot expressions. This systematic nature is related to the idea that various metaphors that are used in ordinary language are strongly associated with common underlying conceptual structures. That is, conventional metaphorical expressions cluster together because they share an underlying ‘root metaphor’ (cf. Shen and Balaban 1999). As Lakoff and Turner explain,

... without such a conceptual metaphor as LIFE IS A JOURNEY, there would be no conceptual unity to such ordinary conventional expressions as “making one’s way in life,” “giving one’s life some direction,” “getting somewhere with one’s life,” and so on. And there would be no explanation for the use of the same expressions like “making one’s way,” “direction,” and “getting somewhere” in the domains of both traveling and living (1989: 116).

Another essential element of CMT is the so-called Invariance Principle (Lakoff 1990), which is one manifestation of metaphor theorists’ endeavours made in the late 1980s and early 1990s to explain how metaphoric mappings could be constrained (Brugman 1990; Lakoff 1990, 1993; Lakoff and Turner 1989; Turner 1990, 1991). If metaphor is based upon conceptual domains, it is important to establish what legitimises the selection of particular image schemas (dynamic, embodied patterns of experience) by particular target domains and why unattested mappings are not licensed (cf. Evans and Green 2006). That is, there seem to be restrictions in terms of which source domains are more likely to serve particular target domains, and constraints on metaphorical entailments that can apply to particular target domains. For example, as Lakoff and Turner (1989) observe, the concept of DEATH is personified in a number of ways. However, the human-like qualities that can be associated with DEATH are restricted: DEATH can ‘destroy’, ‘devour’ or ‘reap’, but as Lakoff (1993) suggests, DEATH is not metaphorised in terms of, for example, FILLING THE BATHTUB or SITTING ON THE SOFA. That is, it would be inappropriate to describe DEATH in terms of any kind of agent at random: for example, a knitter or babysitter. Agents that reap, devour or destroy cause a sudden change in the physical state of an entity.<sup>47</sup> This corresponds exactly to the nature of the concept

---

<sup>47</sup> Note that Lakoff (1993) also proposes that DEATH should *not* be metaphorised in terms of TEACHING on the grounds that TEACHING (unlike DEATH) does not cause a sudden change in the physical state of an individual.

DEATH, whose ‘cognitive topology’ (‘inherent’ conceptual structure) is preserved by mappings like DEATH IS A DESTROYER but not by mappings like \*DEATH IS A KNITTER. In order to account for these restrictions, Lakoff (1993: 215) proposed the Invariance Principle: “Metaphorical mappings preserve the cognitive topology (that is, the image schema structure) of the source domain, in a way consistent with the inherent structure of the target domain”.

Consider another example to illustrate the Invariance Principle: “*Our relationship has hit a dead-end street*”. If this remark is understood as a metaphor, which is actually built upon the conceptual metaphor LOVE IS A JOURNEY, the cognitive structure (which 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 and Green 2006: 295):

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

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

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.

Another 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. Consider the examples in (26), which relate to the metaphor CAUSATION IS TRANSFER (OF AN OBJECT):

---

That is, the mapping in the ‘metaphor’ DEATH IS A TEACHER does not preserve the cognitive topology of the source (TEACHING).

However, in another approach, this metaphor builds upon a metonymy: the teacher is the *awareness* of death. That is, for example, humans know that (some day) they are going to die, and it may teach them how to live their lives. Therefore, in contrast to Lakoff’s explanation, DEATH IS A TEACHER is an apt metaphor (Gábor Simon, personal communication, 2017).

- (26) a She gave him a headache. (state)  
 b She gave him a kiss. (event)

As Evans and Green (2006) explain, although the source domain for both of these examples is TRANSFER, the first example relates to a state and the second to an event. The source domain (TRANSFER) entails that the recipient is in possession of the transferred entity. However, this entailment works well with ‘states’ only, since they are temporarily unbounded. The same entailment is incompatible with ‘events’, since they are bounded and therefore cannot ‘stretch’ across time. For an illustration, consider the following examples:

- (27) a She gave him a headache and he still has it. (state)  
 b \*She gave him a kiss and he still has it. (event)

The idea of the Invariance Principle that ‘metaphoric entailments that are incompatible with the target domain will fail to map’ is also applicable to our LOVE IS A JOURNEY metaphor: we do not think of the ‘end of love’ as something/a destination to be reached.<sup>48</sup> Therefore, once a related structure has been identified between the two domains (LOVE and JOURNEY), the process of metaphoricisation flows smoothly, gets completed and the implication of the speaker’s remark will arise: decisions have to be made in/about the relationship.

### 4.3 Some Limitations of Conceptual Metaphor Theory

Although Conceptual Metaphor Theory works well with a large number of metaphors, it has its limitations in relation to a) the idea of *experientiality* in metaphorical reasoning, b) particular examples of metaphor and c) the inner processes of metaphor. Let us consider each of these in turn.

As to the experiential limitation, the spatial representation of more abstract domains should be mentioned: subjects’ estimates about the passage of time do seem both to depend upon the particular spatial metaphors for time prevalent in their native language, and to be affected by non-verbal spatial information.<sup>49</sup> The concern here is that there is no inverse

<sup>48</sup> This, however, does not invalidate the idea that life is full of goals to be reached. As Lakoff (1993: 227) explains, in the LIFE IS A JOURNEY metaphor, “goals in life are destinations, that is, desired locations to be reached”.

<sup>49</sup> Thus, words denoting spatial dimensions such as the adjective ‘long’ and the concept of SPACE are mapped to temporal dimensions: a long night or TIME IS SPACE.

dependence of spatial representations upon temporal metaphors (Casasanto 2005). However, as Camp (2006) argues, it is highly unlikely that the relevant asymmetry in direct cognizability obtains: our experiences of these topics are at least as embodied as concrete, and are accessible at least as early in life, as our experiences of the domains in whose terms we characterise them metaphorically.

Another experiential limitation concerns Lakoff's idea that a large number of expressions are actually motivated by the conceptual metaphor ANGER IS HEATED FLUID IN A CONTAINER (Lakoff 1987). Consider the examples in (28) below (Kövecses 2002):

- (28) a His pent-up anger welled up inside him.  
 b She could feel her gorge rising.  
 c We got a rise out of him.  
 d My anger kept building up inside me.  
 e Pretty soon I was in a towering rage.  
 f She got all steamed up.  
 g Billy's just blowing off steam.  
 h I was fuming.  
 i He was bursting with anger.  
 j I could barely contain my rage.  
 k I could barely keep it in anymore.

However, as Ortony et al. (1988) argue, children experience the concept of ANGER well before they understand the effects of heat on fluid pressure in closed containers (cf. Camp 2006).

Continuing the discussion with the second type of limitation to CMT, it should be noted that metaphor theory simply fails to explain certain cases. An illustration 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 and Connine 1993; Camp 2006; Forceville 2008; Gentner and Wolff 1997; Gernsbacher et al. 2001; Gibbs and Colston 2006; Gildea and Glucksberg 1983; Giora 2008; Glucksberg 2003; Glucksberg and Keysar 1993; Glucksberg et al. 1982; Grady et al. 1999; Kazmerski et al. 2003; Keysar 1989; Kintsch 2000; Kintsch 2008; Kintsch and Bowles 2002; Lakoff 2008; Mashal et al. 2007; Shen 1989; Sperber and Wilson 2008; Wolff and Gentner 1992; Wolff and 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:

Table 2. Cross-domain mappings for SURGEON IS A BUTCHER

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

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.

However, as Grady et al. (1999) argue, metaphor theory runs 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 (that is, the meaning of ‘incompetence’)” (Kövecses 2005: 268; the clarification in parentheses is added). 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 such 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.<sup>50</sup>

Finally, let us consider the third type of limitation – the inner processes which should perhaps be better explained in CMT. As Slingerland (2008) observes, one of the most basic uncertainties concerns the question of how a particular metaphor serves to constrain possible source domains, as well as the issue of determining what parts of those source domains become conceptually active in the metaphor. According to CMT, in metaphorical reasoning the structure of the more concrete source domain is projected onto the target domain, where the projection is constrained only by a minimal “skeleton structure” already present in the target. The entailments of the source domain then structure our understanding of the target. However, Slingerland finds the way this skeletal structure-constraining function actually works a bit

<sup>50</sup> See more on the surgeon-as-butcher example in Section 5.3.

mysterious: why some metaphors are felt to be ‘apt’ and others not, for instance, or under what principles source domain structures are filtered as they are projected onto the target?

Another problem that Slingerland mentions in connection with CMT is that, according to him, some metaphors seem to be limited by a target that possesses a great degree of pre-metaphoric structure. He provides the example “*Juliet is the sun*”, which, he argues, is immediately apt and comprehensible, and contrasts it with “*Juliet is Jupiter*”, which, in order to be comprehensible, would need some explanation. Slingerland also claims that we somehow know what qualities (for example, ‘warmth’ and ‘radiance’) could be projected from the source domain (SUN), and what attributes should be ignored (being an orb of fire up in the sky, being round, and so on). Moreover, which features are most likely to be mapped in the Juliet-as-the-sun metaphor depends very much on the comprehender’s direct, literal understanding of the target (Juliet), who, in actual fact, has very little in common with the sun. Barsalou supports this idea in connection with the ANGER IS HEAT metaphor, which underlies such remarks as “*He blew his top*” or “*He is getting hot under the collar*”. He suggests that the proper understanding of these metaphors presupposes (some) knowledge of the target domain:

A direct, nonmetaphorical representation of an abstract domain is essential for two reasons: first, it constitutes the most basic understanding of the domain. Knowing only that *anger* is like *liquid exploding from a container* hardly constitutes an adequate concept. If this is all that people know, they are far from having an adequate understanding of *anger*. Second, a direct representation of an abstract domain is necessary to guide the mapping of a concrete domain onto it. A concrete domain cannot be mapped systematically into an abstract domain that has no content (Barsalou 1999: 600).

According to Slingerland (2008), perhaps the most important limitation of CMT is that cross-domain mapping, which involves the “use” of one domain to structure another, is a matter of human imagination, rather than of creativity. The comparison of A and B certainly provides us with a degree of conceptual flexibility, but it does not contribute to human beings’ capability to go beyond A and B and create an entirely new structure, C. As Slingerland explains, to account for such phenomena, a framework should be constructed in which “structure from multiple domains can be selectively combined in a separate, “blended” space, resulting in a completely novel structure” (2008: 176).<sup>51</sup> This will be accomplished in “second generation”

---

<sup>51</sup> Péter Pelyás (personal communication, 2015), however, notes that creating an entirely new structure from A and B may not be the purpose in understanding metaphor.

cognitive linguistics, in which (conceptual) metaphor is simply one form of mapping incorporating a multiplicity of conceptual spaces.

To sum up, criticism of CMT *can* be justified in particular cases. In some others, however, the metaphor model which was proposed by Lakoff and Johnson (1980) only *seems* to run into difficulty explaining particular examples. Let us conclude this section by considering three such cases.

As mentioned earlier, some proponents of Metaphor Theory see metaphorical extension as a relatively rigid and unmotivated process assuming that it is predictable, and it is based upon principles of ‘analogy’ and ‘similarity’ and the interplay between full conceptual domains. Grady et al. (1999), however, argue that there is no obvious sense in which the concepts paired in a few entrenched metaphors are similar or analogous to one another:

(29) Tomorrow is a *big* day for this organization. [i.e. important]

(30) These two colours are not particularly *close*. [i.e. similar]

In their view, being “scalar” in some sense is not sufficient motivation for the metaphors: IMPORTANCE IS SIZE or SIMILARITY IS PROXIMITY partly on the grounds that IMPORTANCE, say, cannot be mapped onto SIMILARITY.

Pelyvás (2002) attempted an answer to this question by suggesting that Grady et al. downplay the importance of structure and relationships holding within the source domain; they might have overlooked the fact that while in IMPORTANCE a property of one entity is directly measured against a scale, in SIMILARITY the properties of two entities are compared first and then the difference is measured against a scale.

It may follow from this example that in some metaphors the focus is on relational commonalities, and corresponding objects in the target and source need not be similar (see also Gentner and Clement 1988; Shen 1992). The discussion of (29) and (30) also suggests that compatibility of structure is essential in metaphorical extension, even at the lexical level.

The same logic can be applied to cases where the relation between the two domains (source and target) is not ‘lack of similarity’, as in (29) and (30) above, but alleged contrast (Coulson and Matlock 2001). Consider (31) below:

## (31) Titanic: Unsinkable After All

The above headline exemplifies simultaneous reference to the ship, originally claimed by some to be unsinkable, but which proved otherwise, and the movie about the ship, which was quite successful, both with the critics and the general populace. Besides this contrast, however, the two inputs do share relational structure (topology), since in both cases there is an air of ‘irresistibility’ or ‘success’: similarly to the ship’s alleged capacity to voyage through any wave (or whatever) in perhaps the most adverse weather conditions, the movie also ran its course as perhaps one of the most stunning films with its Oscars and millions of fans worldwide.

#### 4.4 Conceptual Metaphor Theory vs. Blending Theory

As already stated in Section 2.3.1, when Blending Theory (Fauconnier and Turner 1994, 1998, 2002) was first constructed, its proponents claimed that it represented an *alternative* framework to Conceptual Metaphor Theory. However, there are good reasons to believe that, in some cases, Conceptual Metaphor Theory and Blending Theory are *complementary* rather than competing models, as explicitly argued by Grady et al. (1999). Before explaining metaphor in such a complementary framework, let us briefly highlight the most significant differences between Conceptual Metaphor Theory and Blending Theory. This will be accomplished by way of recalling (re-discussing) particular aspects of the two theories, and by providing further explanation if necessary. The distinction between Conceptual Metaphor Theory and Blending Theory and their interaction will also be pivotal in our structural comparison of metaphor and irony in Chapter 8.

##### Spaces vs. Domains

Conceptual metaphors are mappings which hold between experiential domains stored in long-term memory. The domains are highly abstract knowledge structures, based on “lifeworld experience”. As an example, consider the LIFE IS A JOURNEY metaphor, where cross-domain mapping sets up ontological correspondences between elements of the conceptual-cultural model of JOURNEY and whatever structure there is in the stored cognitive representations of LIFE.

On the other hand, the basic unit of Blending Theory is the ‘mental space’. As already outlined in Section 2.3.2, mental spaces consist of a “set of activated neuronal assemblies”

(Fauconnier and Turner 2002: 40) that form a coherent structure. They are often marked in some way as a ‘past’ space or ‘purported belief’ space, and they are potentially nested inside of other spaces. For instance, as Fauconnier explains,

... in saying *Liz thinks Richard is wonderful*, we build a space for Liz’s reported beliefs, with minimal explicit structure corresponding to Richard’s being wonderful. In saying, *Last year, Richard was wonderful*, we build a space for “last year,” and in saying *Liz thinks that last year Richard was wonderful*, we build a space for last year embedded in a belief space (1997: 11).<sup>52</sup>

Mental spaces are momentary constructs that are constructed in working memory, prompted, among other things, by language, and that draw on more entrenched frames and mappings. As Grady et al. observe,

[m]ental spaces ... are not equivalent to domains, but, rather, they depend upon them: spaces represent particular scenarios which are structured by given domains ... [and where] the recruited structure is only a small subset of knowledge of that domain. In short, a mental space is a short-term construct informed by the more general and more stable knowledge structures associated with a particular domain (1999: 102).

Finally, since metaphors might be grounded in bodily experience with the physical and cultural world, and involve well-established knowledge structures, they incorporate a less consciously/explicitly motivated process (especially in the case of dead metaphors) as compared to conceptual integration networks, which involve no entrenched (but on-line) conceptualisations.<sup>53</sup>

#### The Number of Spaces/Domains Involved

In their first paper on Blending Theory, Fauconnier and Turner (1994) referred to conceptual integration (blending) as the ‘many-space model’. This points to an obvious difference between Conceptual Metaphor Theory and Blending Theory: while Blending Theory employs a minimum of four spaces, Conceptual Metaphor Theory is a two-domain model.

<sup>52</sup> Note that all spaces are embedded, in all cases, in the speaker’s belief space.

<sup>53</sup> ‘Motivation’ as a distinguishing factor of metaphoric and ironic representations will be discussed in Section 8.5.

### The Direction of Mapping

Conceptual Metaphor Theory incorporates unidirectional cross-domain mappings (from source to target). Blending Theory, however, involves selective projection of structure from inputs to the Blended Space and the Generic Space. In addition, structure from the blend can be projected *back* to the input spaces. Consider the Clinton-as-French-President example, discussed in Chapter 2 (and repeated here for convenience):

(32) In France, Bill Clinton wouldn't have been harmed by his relationship with Monica Lewinsky.

As is explained in Evans and Green (2006), in (32) the structure that emerges in the blend is projected back to the input spaces. This is termed 'backward projection', and is the process that is responsible for the disanalogy between France and the US. Through this process, the blend (with its emergent structure) modifies the input spaces: a significant contrast is established between the nature of French and American moral attitudes which govern the behaviour of politicians in those countries. This information may influence the encyclopaedic knowledge system of the addressee.

In all, the two theories differ in relation to the direction of conceptual mapping which is incorporated in them. Thus, they employ different architectures in order to model similar phenomena.

### The Content of Mapping

Metaphor Theory maps entities and relationships. For example, in LOVE IS A JOURNEY 'travellers' maps to 'lovers', and 'vehicle' to 'love relationship'. In contrast, Blending Theory maps complex scenarios, such as a committee in an official setting in "*The committee has kept me in the dark about this matter*".

Another difference between the two models in terms of the content of mapping is that in Metaphor Theory only those elements are carried over to the target that are consistent with it (cf. Lakoff's Invariance Principle in Section 4.2). Blending Theory, however, allows the projection of contradictory elements, too.<sup>54</sup>

---

<sup>54</sup> This will be discussed in detail in Chapters 8 and 9.

### Emergent Structure

A particularly significant difference between the two models is that while Blending Theory provides an account of emergent structure, Conceptual Metaphor Theory does not. This follows from the fact that Conceptual Metaphor Theory is a two-domain model, and especially from the idea that “the content of the source tends to ‘disappear’” in the metaphorisation process (Péter Pelyvás, personal communication, 2015).

### Compositionality

As is explained in Chapter 2, Fauconnier and Turner’s (1994, 1998, 2002) blending model is associated with emergent (that is, not compositional) meanings. For the purposes of the dissertation it should be noted that metaphors are also non-compositional. In this respect, Lakoff’s metaphor model and Fauconnier and Turner’s Blending Theory are similar. Consider the following example:

(33) We’ve got the framework for a solid argument.

This metaphor, which is taken from Lakoff and Johnson (1980), is built upon the following well-established knowledge about buildings: they typically have a groundwork and foundation, on which a structure (or framework) is built. This structure stands above the ground. If the framework does not have a solid foundation and groundwork, or the structure itself is not solid enough (or both), it is most likely to collapse. The understanding of this metaphor requires projection (or mapping) from one domain of experience (building) to another (argument).

The processing of (33) can be explained in terms of a rather complex set of projections (Kövecses 2002). The metaphorical (‘building’-to-‘argument’) mappings can be illustrated by the following pairs: ‘foundation’ to ‘basis that supports the argument’, ‘framework’ to ‘overall structure of elements that make up the argument’, ‘architect’ to ‘maker/builder of the argument’, ‘strength’ to ‘lastingness/stability of the argument’, or ‘collapse’ to ‘failure of the argument’. In accordance with the fundamental principles of cognitive semantics, these projections, rather than the principle of compositionality, could better explicate the representation of that metaphor.

Now that Conceptual Metaphor Theory and Blending Theory have been contrasted, let us see how these two models contribute to a complementary model of metaphor.



## **CHAPTER 5**

### **A COMPLEMENTARY THEORY OF METAPHOR**

#### **5.1 Introduction**

This chapter first outlines the most significant complementary models of metaphor that can be found in the literature. Then, a working definition of this mode of thought is presented, which essentially corresponds to the complementary (hybrid) model of metaphor. Then two experiments are detailed. They were conducted to test whether or not the examples which met the criteria of the proposed definition were understood figuratively by ordinary language users.<sup>55</sup> Finally, some metaphors will be used to demonstrate how the hybrid model and the brain – presumably – work (when processing metaphors).

#### **5.2 Complementary Views of Metaphor: A General Review of the Literature**

The idea that metaphor and blending are complementary processes (of understanding) is not new. As an example, a hybrid model of metaphor was proposed by Nueckles and Janetzko (1997), who suggest that the representation of this mode of thought incorporates two successive phases: first, the source and the target domains are analysed. If “enough” similarities are found, the comprehension process will “cease”. If, however, the source-target similarity is not “sufficient”, then the metaphor cannot be understood by just resorting to the lexical meanings of the source and target domains. In this case, the ‘synthesis’ of the two domains follows, which incorporates the activation of broader world knowledge about the semantic domains involved. Through this process, new components of meaning are “constructed”, resulting in a coherent interpretation. This is reflected in a high number of ‘emergent’ features.

For an illustration of their model, Nueckles and Janetzko analyse the metaphor MAN is a WOLF. As they argue, the concept WOLF incorporates the attribute ‘predator’, referring to how wolves behave towards other animals. However, when this feature is applied to MAN, it assumes a slightly different meaning. In this case, ‘predator’ may refer to men’s behaviour towards other men. Therefore, in order to understand this metaphor, the feature ‘predator’ needs to be reinstantiated in the semantic domain of the target. As a result, the meaning of the feature is transformed, providing interpretations like ‘men are insidious/competitive in their dealings with other men’. Nueckles and Janetzko also argue that such features (as ‘being

---

<sup>55</sup> In all three experiments of the dissertation the term ‘ordinary language user’ (lay speaker) is employed simply to contrast the experimental subjects to professional and (academic) linguists.

insidious/competitive’) do not form part of the conventional representations of MAN and WOLF. Therefore, the metaphorical meaning is constructed by means of emergent features – that is, attributes that emerge when the source and target domains are brought into interaction.

Nueckles and Janetzko’s model faces a number of objections. Apart from leaving notions like ‘enough/sufficient similarity’ (between source and target) unexplained, they argue that when there is enough similarity between the two input domains, the comprehension process will “cease”. As we shall see in the following section, the phase in metaphorical representation in which similarities between the source and target domains are found is a *precondition* for the mapping, rather than being the stage where metaphorical representation stops. In other words, Nueckles and Janetzko’s model does not constitute an explicit description of how metaphors are actually (fully) processed.

Finally, although the idea that context (for example, the actual communicative intentions of the speaker) may have a significant role in the understanding of the man-as-wolf metaphor, there seems to be no reasonable argument for the claim that the concepts WOLF and MAN *exclude* the attributes ‘insidious’ and ‘competitive’.<sup>56</sup> Although the literature has presented evidence for different levels of emergent organisations in metaphors (see, for example, Asuka and Goldstone 2012; Becker 1997; Blasko and Connine 1993; Gineste et al. 2000; Tourangeau and Rips 1991; Wilson and Carston 2006), in the man-as-wolf example the attributes of ‘insidious’ and ‘competitive’ do not seem to be emergent, since they are *inherent* properties of both WOLF and MAN.

The next complementary model of metaphor to be discussed was suggested by Tendahl, who acknowledged the “need and possibility of achieving a broader and more realistic theory of metaphor” (2009: 248) by bringing together research from different disciplines with overlapping research goals. He presents a hybrid theory of metaphor integrating Blending Theory (Fauconnier and Turner 1994, 1998, 2002), Conceptual Metaphor Theory (Lakoff and Johnson 1980), and Relevance Theory (Sperber and Wilson [1986] 1995). The first two of these models have already been discussed in this dissertation. Before proceeding any further, however, Relevance Theory should also be summarised in short: as Sperber and Wilson ([1986] 1995) claim, recipients (in other terms, ‘hearers’) in a verbal interaction expect that the utterer’s words will be relevant to them. Once an interpretation has been found that satisfies expectations of relevance, the addressee stops processing, or continues representing the following constituents.

---

<sup>56</sup> For a more detailed discussion of the man/husband-as-wolf metaphor in terms of contextual constraints, see Pálincás (2008).

In his explanation, Tendahl uses the category ‘ad hoc concept’, which he attributes to Carston (2002), who has further elaborated the Relevance Theory account of metaphor. For both Carston and Tendahl, ad hoc concepts are loosening or narrowings that are constructed on-line via inferences from the lexical concepts figuring in the “logical form” of the utterance. For Carston, the logical form

is a structured string of concepts, with certain logical and causal properties but it is seldom, if ever, fully propositional. It is a kind of template or schema for a range of possible propositions, rather than itself being a particular proposition (Carston 2002: 57).

That is, instead of encoding a complete thought or proposition, the logical form serves as the *foundation* which, under pragmatic influence, provides the intended proposition. As an example, the metaphor “*Oliver is a bulldozer*” is supposed to incorporate the distinct ad hoc concept BULLDOZER\*, which is derived from its lexically encoded counterpart.

However, as Tendahl points out, Relevance Theory does not explain the way in which ad hoc concepts are formed from lexical ones. Similarly, he claims that Conceptual Metaphor Theory “has not made any suggestions about the conditions determining which elements from a source domain are mapped to a target domain” (2009: 258). Furthermore, Lakoff and Johnson’s model has not paid sufficient attention to the pragmatic aspects of metaphor use and to the creation and interpretation of metaphors that do not instantiate an underlying conceptual metaphor. Because for Tendahl these models proved to be inadequate, he saw an advantage in integrating aspects of Blending Theory with these two other theoretical frameworks in order to explain the online processing of metaphor. He finds this hybrid model well-suited to capture “the dynamics of the ways in which different kinds of linguistic and contextual information interact” (2009: 258).

Brandt (2013), however, presents some objections to Tendahl’s model. She, for example, argues that some problems persist in the merger as to a missing *semantic* dimension to the analysis of relevance in relation to the interpretation of meaning. Brandt gives a short discussion of Tendahl’s example, in which Tony Blair employs the following metaphorical language: “... we have launched an unprecedented crusade to raise [educational] standards” (2009: 222). As Brandt argues, although Tendahl rightly notices the “extra force” emerging as part of the blend of an unprecedented crusade being launched and political action but does not explain how the impression of enhanced “force” happens to emerge. Furthermore, the derivatory (ad hoc) lexical concept “CRUSADE2” (CRUSADE1 being a literal crusade),

including “assumptions about campaigns, political/religious/social change, etc.” (2009: 228) likewise presupposes the metaphoricity to be explained.

Coulson (2001) proposes a theory of on-line meaning-construction, the so-called Space Structuring Model. This account is then applied in a number of studies to explain particular linguistic phenomena. In Coulson and Matlock (2001), for example, they propose a hybrid model of metaphor which is motivated by both Conceptual Metaphor Theory (Lakoff and Johnson 1980) and Blending Theory (Fauconnier and Turner 1994, 1998, 2002). In Coulson and Matlock’s view, “metaphor comprehension involves coordinating various conceptual domains in a *blend*, a hybrid model that consists of structure from multiple input spaces and that often develops emergent structure of its own” (2001: 296). However, as the discussion in Section 4.4 indicates, conceptual domains, and mental spaces and blends are notions of processing mechanisms (Conceptual Metaphor Theory and Blending Theory, respectively) which are built on different basic assumptions. Therefore, bringing them (and their components) together in a single theory (of metaphor) needs more explanation than what Coulson and Matlock (2001) provide. Otherwise, obscurities of various sorts might appear. As an example, borrowing elements from Blending Theory, Coulson and Matlock argue that metaphorical meaning arises out of the information which is represented in the integration network of *mental spaces*. Since, however, their hybrid model is *also* based on Conceptual Metaphor Theory, it is difficult to see what exact elements of that model contribute to Coulson and Matlock’s complementary account of metaphor. That is, calling the ‘metaphorical’ Space Structuring Model a *hybrid* theory needs to be better explained, and also the particular mechanisms involved should be illustrated.

As discussed in Section 2.3.4, Grady et al. claim that the conventional conceptual pairings (and one-way mappings) are related to Conceptual Metaphor Theory, and are inputs to and constraints on the kinds of dynamic conceptual networks posited within Blending Theory. In their account, metaphor and blending are seen as complementary mechanisms:

If conceptual metaphor theory is primarily concerned with well-established metaphoric associations between concepts, and blending theory focuses on the ability to combine elements from familiar conceptualizations into new and meaningful ones, then conceptual metaphors are among the stable structures available for exploitation by the blending process. As we have ... seen ..., conventional metaphors feed the blending processes by establishing links between elements in distinct domains and spaces (1999: 110).

However, as Pelyvás (2002) notes, although the above observation may offer a legitimate relation between metaphor and blending, it can also be read as suggesting that further processes are necessary before metaphors can be properly understood. According to Pelyvás, this gives the perhaps unintended impression that metaphors depend on blending processes. However, as he claims, although metaphor may feed blending processes, there is another way of explaining the relation between metaphor and blending: the blending process should be regarded as an interim stage in the process of metaphorical extension. As Pelyvás states, before the mapping occurs, the two domains are compared. If there is sufficient similarity between them, metaphor can run a full course. Otherwise the blend ‘gets stuck’ and does not develop into a metaphor.<sup>57</sup> Even if Grady et al.’s idea about metaphorical blends is correct, their complementary model (explanation) is not explicit enough about how metaphors are actually processed.

### 5.3 A Working Definition (Hybrid Model) of Metaphor

The dissertation explained metaphor and conceptual integration through different linguistic examples: the comprehension of “*Our relationship has hit a dead-end street*” was explained in metaphorical terms (see Section 4.2), while the representation of “*The committee has kept me in the dark about this matter*” was considered a matter of conceptual integration (see Section 2.3.3). The explanations of these two processes reveal that metaphor and conceptual integration are actually two different processing mechanisms that work under different assumptions (see Section 4.4).

Despite the differences between metaphor and conceptual integration, however, the discussion in this dissertation also adopts the idea that these two processes are not competing but complementary mechanisms.<sup>58</sup> This plays a significant part in the following working definition of metaphor: a metaphor could be considered a mode of thought which is a matter of *both* blending and mapping processes, the first involving two basic phases: alignment and evaluation.<sup>59</sup> Consider Figure 3 below:

---

<sup>57</sup> Pelyvás’ view of the relation between metaphor and blending will be considered as the guiding principle in the discussion of the (alternative) hybrid theory of metaphor in Chapter 5.

<sup>58</sup> See Fauconnier and Lakoff (2009), and for a similar claim made in terms of the development of modal meanings in English, see Pelyvás (2002).

<sup>59</sup> Evans 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).

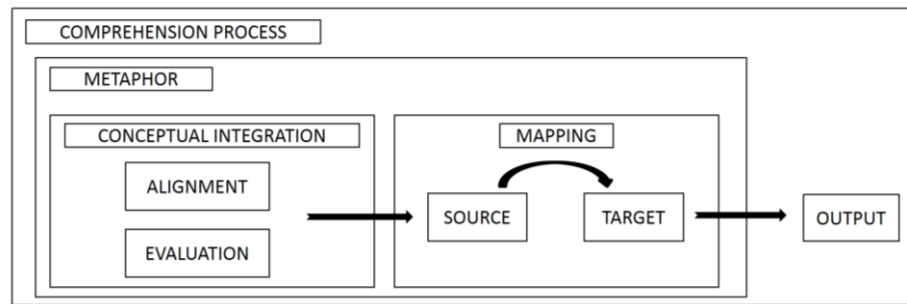


Figure 3. The schematic representation of a complementary view of metaphor

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. In case a compatible structure is found in the input domains, as Figure 3 shows, cross-domain mapping occurs. This process might be one of the most prototypical attributes of metaphor(isation). 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 the emergence of figurative meaning.

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. As the discussion of "*This surgeon is a butcher*" in Section 4.3 shows, this example cannot be explained in terms of unidirectional metaphorical mappings. Rather, what the comprehender experiences is a cognitive construction which 'gets stuck' at the level of blending. This idea is also legitimised by Lakoff's (1990) Invariance Principle, stating that metaphorical extensions presuppose consistent/compatible structure. Since this example clearly does not incorporate such a construction, the process of metaphorisation cannot run a full course.<sup>60</sup>

Now that the working definition (hybrid model) of metaphor has been outlined, two experiments will be described. In them subjects were asked to decide whether the examples which met the criteria of the working definition were understood figuratively or not. If yes, those items satisfy the criteria of the proposed metaphor theory and the presupposition that the

---

Another important point to note is that the complementariness of blending and metaphor is also true in relation to the operation of some blends. For an illustration consider the committee example (analysed as a blend in Section 2.3.3), whose representation inherently contains the metaphor 'darkness is ignorance'.

<sup>60</sup> For discussion of the surgeon-as-butcher example as a blend, see Coulson and Oakley 2005; Coulson and Van Petten 2002; Evans and Green 2006; Fauconnier and Turner 1998; Grady et al. 1999; Imaz and 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.

hybrid model (of metaphor) is a means of figurative meaning construction. Finally, some of them will be used to demonstrate how the complementary model and the brain presumably work (when understanding metaphors).

## **5.4 Experiment 1**

### **5.4.1 Method**

#### **5.4.2 Participants**

Twenty-two native Hungarian-speaking undergraduate students (regular and part-time) from the University of Nyíregyháza volunteered to participate in the study. Sixteen subjects were women (mean age = 31.9) and 6 were men (mean age = 22).

#### **5.4.3 Materials and Expectations**

The experiment involved a questionnaire (see Appendix A, and its English translation Appendix B), in which nine conversational exchanges were presented. Each of them was preceded by a description of the contextual setting. The experimental items contained a highlighted part (key element), which the (semantic and psycholinguistic) literature generally and the working definition which is described in Section 5.3 particularly consider metaphoric. Each example depicts some everyday converse.

It was presumed that metaphorical thinking would enable subjects to process the items in accordance with the complementary model which was depicted in Section 5.3; essentially, participants were expected to interpret one domain of experience in terms of another. The experimenter presupposed that participants would interpret the key elements in a figurative sense and would provide a (non-metaphoric) paraphrase accordingly.

#### **5.4.4 Procedure**

The subjects were asked to read the instructions to themselves as the experimenter read them aloud. They were instructed to read the items, and explain the highlighted parts in them in their own words on the dotted lines following the converses. The questionnaire also incorporated a sample to familiarize the participants with the task. The testing session lasted approximately 20 minutes.

### 5.4.5 Results

In participants' paraphrases of the highlighted parts, elements were expected to have appeared which clearly showed that the bolded texts in the items had been understood in a metaphorical sense (see Appendix C for examples). To illustrate, when paraphrasing Example 1 (*"The board keeps me in the dark until all the candidates have been interviewed"*), subjects used expressions like "nem tudja a döntést" (does not know about the decision), "bizonytalan" (unsure), or "nem értesít" (keeps uninformed). These (and many other) phrases indicate that participants have understood the texts in bold as expected – in a metaphorical sense.

As Table 3 shows, all key elements were understood figuratively by all or the majority of the participants. Seven bolded texts were rated as being metaphorical by all subjects.

However, the key element in Example 8 received 3 non-metaphoric evaluations. In this item two cousins are talking. One of them (Ábel) asks the other (Márton) about his new job in an IT company. The reply is that *"It is a real prison"*. The situational setting that Márton feels uncomfortable about talking about his new job, and that he works for an IT company (and not in a prison) would presuppose the figurative understanding of *"It's a real prison"*. However, 3 subjects may have overlooked these contextual clues.

There was 1 participant who did not provide any interpretation of Example 3. He may have been unsure about the figurative meaning of the highlighted part (*"He is a real shark"*) in that context.



Table 3. Evaluation of participants' paraphrases of the experimental items

	Items (the metaphors/key elements only)	Metaphoric	Not metaphoric	No answer
		out of 21 answers		
1.	A bizottság sötétben hagy tapogatózni mindaddig, amíg az összes jelöltet meg nem hallgatják. The board keeps me in the dark until all the candidates have been interviewed.	21		
2.	A kapcsolatunk zsákutcába jutott. Our relationship has hit a dead-end street.	21		
3.	Ő egy igazi cápa! He is a real shark.	20		1
4.	Majd' szétrobbanok! I'm blowin' up!	21		
5.	Az érvelésem minden gyenge pontját hevesen támadták. They attacked every weak point in my argument quite fiercely.	21		
6.	Gábor révbe ért. Gábor has found a berth.	21		
7.	Kovács tanárnő fertőzött meg a fizikával. It was my teacher Mrs Kovács who infected me with Physics.	21		
8.	Egy igazi börtön. It's a real prison.	18	3	
9.	Teljesen lefagytam. I totally froze up.	21		

#### 5.4.6 Discussion

In line with expectations, Experiment 1 has shown that most participants understood the key elements in the examples in a figurative sense. In their structures the experimental items followed the same underlying pattern: they invited subjects to conceptualise one domain of experience in terms of another. To illustrate, in “*The board keeps me in the dark until all the candidates have been interviewed*”, the domain of KNOWLEDGE is understood in terms of the domain of VISION.<sup>61</sup>

Successful non-figurative paraphrases of the bolded texts may provide information about the way participants think: in their understanding of the highlighted parts subjects are assumed to have relied, to a great extent, on their ability to conceptualise one domain of experience in terms of another. This is what the working definition regards as ‘metaphorical thinking’, and the linguistic items which are associated with it as metaphors.

<sup>61</sup> See Chapter 8 for a detailed analysis of this metaphor in the hybrid model.

In sum, the questionnaire in Experiment 1 was suitable for testing linguistic items as to their figurative character. Essentially, since each item was mostly evaluated as figurative, and because they meet the criteria of the working definition of metaphor, they can be associated with metaphorical thinking. Similar results are expected in Experiment 2.

## **5.5 Experiment 2**

### **5.5.1 Method**

#### **5.5.2 Participants**

Twenty native Hungarian-speaking undergraduate students from the University of Nyíregyháza volunteered to participate in the study. Sixteen subjects were women (mean age = 23.5) and 4 were men (mean age = 21.5). None of them participated in Experiment 1.

#### **5.5.3 Materials and Expectations**

The experiment involved a questionnaire (see Appendix D, and its English translation in Appendix E), in which 9 metaphorical expressions (key elements) were presented. The same metaphors were used as in Experiment 1 in the same order. Each was followed by 6 blank lines.

It was expected that metaphorical thinking would enable subjects to interpret one domain of experience in terms of another. The experimenter presumed that participants would understand the key elements in a figurative sense and would write conversational exchanges accordingly.

#### **5.5.4 Procedure**

Subjects were asked to read the instructions to themselves as the experimenter read them aloud. They were instructed to read the expressions in bold, and make short (at most 5-6 lines) conversations incorporating the expressions, too. The questionnaire also contained a sample to familiarize the participants with the task. The testing session lasted approximately 20 minutes.

#### **5.5.5 Results**

The conversational exchanges which students had made were examined in terms of the metaphoric character of the key elements in the converses. As Table 4 shows, the bolded expressions (which were presented to the experimental subjects on their questionnaires) were

understood in a metaphorical sense by most participants. However, the text in bold in Example 4 received 6 non-metaphoric evaluations. This is no surprise, since subjects were not instructed that they should understand the key elements in a metaphorical (or in any other) sense. The bolded expressions in Examples 3 and 8 could be interpreted either metaphorically or non-figuratively. However, all the others were pre-wired for a figurative interpretation only.

Table 4. Evaluation of the key elements in terms of their metaphoric character in subjects' conversations

	Key elements (the metaphors only)	Metaphoric	Not metaphoric	No answer	Obscure answer
		out of 20 answers			
1.	A bizottság sötétben hagy tapogatózni mindaddig, amíg az összes jelöltet meg nem hallgatják. The board keeps me in the dark until all the candidates have been interviewed.	19		1	
2.	A kapcsolatunk zsákutcába jutott. Our relationship has hit a dead-end street.	20			
3.	Ő egy igazi cápa! He is a real shark.	11	6		3
4.	Majd' szétrobbanok! I'm blowin' up!	20			
5.	Az érvelésem minden gyenge pontját hevesen támadták. They attacked every weak point in my argument quite fiercely.	20			
6.	Gábor révbe ért. Gábor has found a berth.	18		2	
7.	Kovács tanárnő fertőzött meg a fizikával. It was my teacher Mrs Kovács who infected me with Physics.	18	1		1
8.	A munkahelyem egy igazi börtön. My workplace is a real prison.	18	1		1
9.	Teljesen lefagytam. Végül kimagyaráztam magam. I totally froze up but I finally managed to answer the questions.	20			

The key elements in Items 7 and 8 both received 1 non-metaphoric evaluation. Interpreting Mrs. Kovács' infecting someone with Physics (Example 7) in a non-figurative sense may have been due to the subject's inattention. "*A munkahelyem egy igazi börtön*" (Example 8) was understood in a non-metaphorical sense (meaning "*I work in a real prison*") by one participant.

There were subjects who left the dotted lines in Examples 1 and 6 blank. They may not have been familiar with the metaphorical meanings of 'sötétben tart valakit' ('keep somebody in the dark') and of 'révbe ér' ('find a berth').

Finally, as Table 4 shows, some subjects wrote conversations in which the key elements made no particular sense. It is presumed that in most of these cases the participants may have apparently been less determined/serious in their efforts to complete the tasks as expected.

### 5.5.6 Discussion

In accordance with expectations, most experimental items were understood in a figurative sense by the majority of the participants. The subjects were able to recognise the figurative meanings, and used them in their conversational exchanges. This suggests that participants had the potential to rely on one domain of experience to understand another. This is the principle that, according to the working definition (and the complementary model) of metaphor, forms the basis of metaphorical thinking.

Both Experiment 1 and 2 reflect subjects' ability to understand the key elements in a figurative sense. Successful decoding of the implied message presupposes that the key elements in the experiments should be conceptualised as an interplay between two domains of experience. Since, as the working definition of metaphor assumes, metaphorical thinking presupposes figurative interpretation, and (most) participants in the experiments had no difficulty in interpreting the bolded expressions, the dissertation considers those key elements apt metaphors. In what follows, the way the hybrid model of metaphor works will be demonstrated using some (metaphorical) items taken from Experiments 1 and 2.

### 5.6 Demonstrating How the Hybrid Model of Metaphor Works

This section analyses two metaphors in the hybrid model. For this, two examples were chosen which had been understood as figurative phenomena by the overwhelming majority of the subjects in both Experiment 1 and 2. These items are considered metaphors, since they meet the most essential criteria of metaphoric thought: they explain one domain of experience in terms of another. For an illustration of the alternative hybrid model of metaphor, consider the following situation:

(34) 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 4, 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.

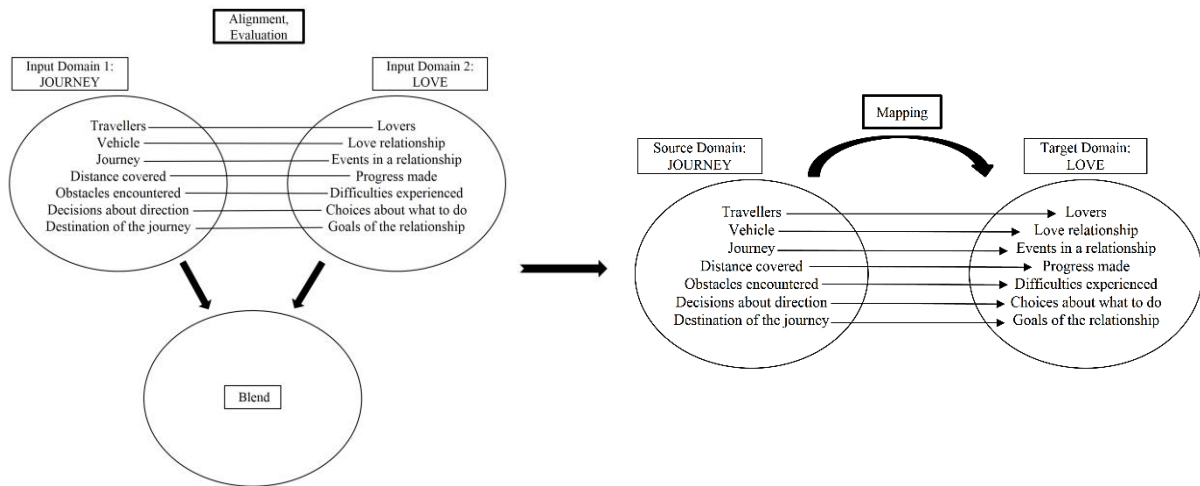


Figure 4. A schematic diagram of “*Our relationship has hit a dead-end street*”, analysed as a metaphor from a complementary (Lakoffian and blending) perspective

The domains are weighed against each other and evaluated in a process in which the relevant conceptual metaphor, LOVE IS A JOURNEY<sup>62</sup> 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, 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’. Furthermore, the ‘journey’ corresponds to the ‘events’ in the relationship, the ‘distance’ the travellers cover to the ‘progress’ the lovers make in the relationship, and so on.

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 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.<sup>63</sup>

Consider another example whose analysis will show if the hybrid model of metaphor works as described in the working definition:

<sup>62</sup> 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).

<sup>63</sup> In Section 4.4, the idea that during the metaphorisation process “the content of the source tends to ‘disappear’” (Péter Pelyvás, personal communication, 2015) was introduced. This may be so in the dead-end street example. Consider, however, the following variant of that statement: “*Our relationship has come to a murky dead end*”. In this case, as Pelyvás (personal communication, 2015) states, ‘murky’ might remain from the source, and so the conceptual structure in the representation might remain a *blend* to some extent.

(35) László attends a linguistic conference. When he gets home, he talks to his wife, Eszter, about his lecture.

Eszter: How did your lecture go, darling?

László: It was fine. I was arguing for a linguistic model persistently. Although **they attacked every weak point in my argument quite fiercely** I managed to answer most questions successfully.

As is illustrated in Figure 5, the representation of “*They attacked every weak point in my argument*” in a complementary framework involves two phases: first, in the alignment stage, correspondences are identified between the inputs. They are possible connections which may have a role in the representation at some point.

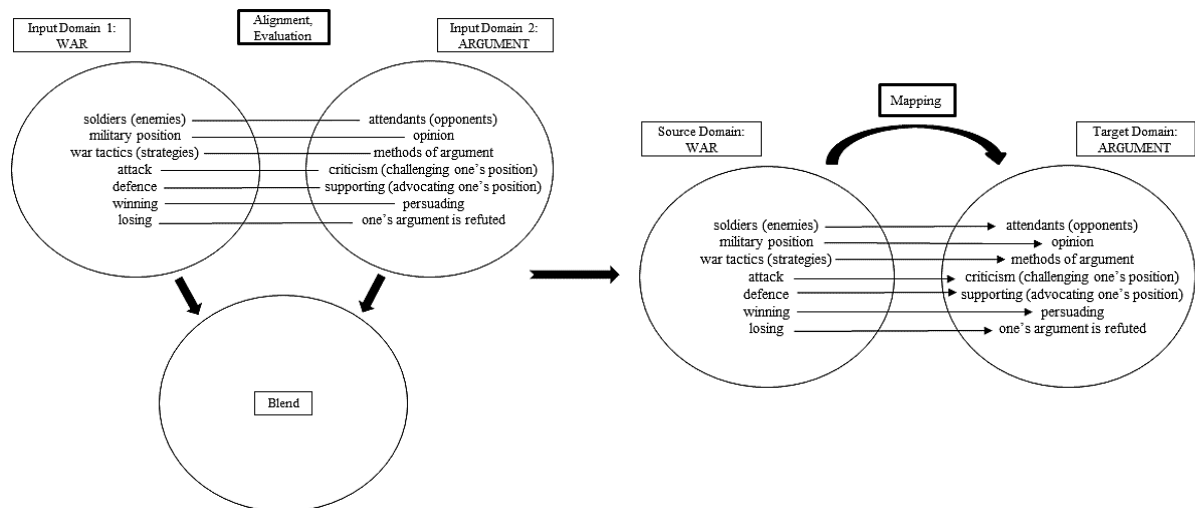


Figure 5. A schematic diagram of “*They attacked every weak point in my argument*”, analysed as a metaphor from a complementary (Lakoffian and blending) perspective

The domains are weighed against each other and evaluated in a process in which the relevant conceptual metaphor, ARGUMENT IS WAR<sup>64</sup> picks out related elements in them. That is, in the Blend, particular components of knowledge structures which concern ARGUMENT are put into correspondence with specific elements relating to WAR. Thus, the ‘soldiers’ in the domain of WAR correspond to the ‘(conference) attendants’ in the domain of ARGUMENT, the ‘military position’ in wars to the ‘opinion’ which people generally put forth in discussions, and so on.

<sup>64</sup> See, for example, Coulson (2001); Evans and Green (2006); Kövecses (2002); Lakoff and Johnson (1980) for discussion/mention of this metaphor.

In (35), the lecturer attends a conference in which the weak points in his arguments are criticised. Accordingly, in the initial phases of representation, contextual cues profile cross-space connections like soldiers-attendants, military position-opinion, attack-criticism in the Blend.

Second, once (at least some of) the relations between the two domains have been identified, cross-domain mapping occurs from source to target (as indicated by the rightward arrows). In this phase of representation (some of the) the conference attendants are metaphorically identified with soldiers, (some of) László's arguments with military positions, and so on.

As László says, they (one or more attendants of the conference) attacked "every weak point" in his argument. This implies that the source incorporates a military position which is vulnerable in particular ways, and the enemy knows about it, too. Furthermore, the enunciator's argument was criticised "quite fiercely", which lends a dynamic character to both Input Space 1 and the Blend: a large amount of force was used in the war and the criticism(s), too.

Finally, the lecturer in (35) replies, he "managed to answer all the questions successfully". This shifts the focus back to the Blend, and profiles cross-domain connections like winning-persuading.

## 5.7 Summary of the Chapter

The chapter has reviewed the literature on the most significant complementary models of metaphor. As the descriptions show, some of those theories cannot explain particular examples, and none make *explicit* claims about how metaphor is actually processed. Therefore, this chapter (also) presented an alternative complementary model of metaphor (which essentially constitutes its working definition), in which the representation of metaphoric examples is seen as a two-stage process: alignment-evaluation, and projection (mapping). In the alignment-evaluation phase the two input conceptual domains (source and target) are marshalled, and measured against each other in a conceptual blend. In case relational structure is found, cross-domain mapping occurs (from source to target domain). The model incorporates elements from Conceptual Metaphor Theory and Blending Theory.

The complementary model of metaphor presented in this chapter is different from the most definitive hybrid accounts in that it is not a (seemingly unsystematic) mingle of Conceptual Metaphor Theory (Lakoff and Johnson 1980) and Blending Theory (Fauconnier and Turner 1994, 1998, 2002). In this alternative model, blending incorporates conceptual

domains (not mental spaces). Essentially, in its terminology and structure the account remains consistent with Lakoff and Johnson's description of metaphor rather than being a model which, on the whole, is more similar to Fauconnier and Turner's Blending Theory (cf. Coulson and Matlock 2001; Fauconnier and Turner 2008).

The hybrid account offered in this section holds that conceptual blending is an inherent and interim attribute of metaphorical representation. With the two-stage explanation of how metaphor works and especially with the schematic illustration of the cognitive processes involved, the model makes original contributions which can be found in none of the earlier complementary theories of metaphor.

The dissertation considers linguistic items metaphors if they meet the criteria of the working definition (of metaphor). Therefore, the chapter described two empirical researches which were conducted to see if linguistic items that conform to the basic principles of the hybrid model of metaphor were interpreted figuratively by ordinary language speakers. The results show that most examples in the experiments were taken in the figurative sense by most participants. The dissertation considered this metaphorical thinking, which was then explained in detail: two metaphors were analysed (as modes of thought) in the hybrid model.<sup>65</sup>

As mentioned in Section 1.2, one of the main objectives of the dissertation is to compare metaphor and irony in terms of their processing mechanisms at the conceptual level of organisation. The comparison will incorporate the alternative hybrid model of metaphor. For the counterpart structure of ironic representation, consider Chapter 7.

---

<sup>65</sup> See Chapter 8 for another metaphor which is analysed in the hybrid model.



## CHAPTER 6

### IRONY: AN OVERVIEW

#### 6.1 A Short History of Irony

##### 6.1.1 The Classical Tradition of 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. Also, Socrates pretended to be ignorant and without knowledge, while trying to gain knowledge through others, but inevitably failing (Kierkegaard 1929). As Barbe notes, “Socratic irony, in either interpretation denotes a discrepancy between appearance and an assumed reality and shares the element of duality with other types of irony” (1995: 62).

In his *Rhetoric*, Aristotle uses irony both to praise and to blame. Nonetheless, he also considers 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).

Similar to Aristotle, Cicero alludes to irony as an ‘attitude’ when he attributes a dual function to it. He distinguishes between “irony as a mere figure of speech and as a pervasive habit of discourse” (Knox 1972: 5). Cicero expands the concept to cover not only ‘saying the opposite’ but also ‘saying something different’. According to him, irony, as a rhetorical figure can occur in any type of discourse; irony is “agreeable as well in grave as in humorous speeches” (Cicero – translated by Watson 1855: 299). That is, it is appropriate for humorous purposes. This idea was endorsed by the Roman rhetorician Quintilian, who argued that “such a practice is permissible when deliberately designed to raise laugh” (Quintilian – translated by Butler, 1921 – 22: 239).

Quintilian recognised different scopes of irony by describing it as a trope and as a figure. As he explains, if

the irony lies in only two words, ... it is a very short trope. ... but in irony considered as a figure, there is a disguise of the speaker’s whole meaning ... for in a trope, some words are put for others, but, in the figure, the sense of a passage in a speech, and sometimes the

whole configuration of a cause, is at variance with the air of our address ... a continuation of *ironical tropes* forms the *figure irony* (Quintilian – translated by Watson, 1885: 165).<sup>66</sup>

The Roman rhetorician sees irony in oratory as a means of concealing hidden meanings and motives. He, as well as Aristotle and Cicero, has an influence on subsequent rhetorical treatises of irony, and thus influences its literary treatment and use. As Barbe (1995) notes, in rhetoric, the definition of irony remains essentially unchanged.

By the middle of the 18<sup>th</sup> century, the concept of irony had scarcely developed in its broad outlines beyond the point already reached in Quintilian. The words ‘irony’ and ‘ironical’ occasionally appear in (written) documents, for example in Burton (1621), Daniel (1649), Fielding (1730) and Nashe (1589). According to Muecke ([1970] 1982), the use of ‘irony’ and ‘ironical’ in those sources seems to anticipate later developments, even if they are only isolated occurrences, not taken up by others. In Fielding’s *The Temple Beau* (1730), for example, Young Pedant says “I rejoice in the irony [of being] called Coxcomb by a Woman”. What Young pedant explains is that women are so “topsy turvy” that when they dispraise, they may be said to have praised. Therefore, in this quote the woman has not used irony, but it is *as if* she had. As Muecke ([1970] 1982) notes, this is considered a radically new expansion of the concept of irony. Fielding is also said to have given the concept another new application: he uses it of the satiric strategy of presenting or inventing a foolish character who ineptly supports and so unconsciously betrays the view the author intends to condemn.

### 6.1.2 Later Concepts of Irony

As Muecke ([1970] 1982) notes, the turn of the 18<sup>th</sup> and 19<sup>th</sup> centuries marked a radical transformation of the concept of irony. The first stage in this new development was to think of irony in terms of *not* the ironist but of the victim of irony. The victim could be either the “butt” of an ironic remark or the person who has failed to see the irony. It is in this period that the idea of ‘being ironic’ actually occurs, especially in describing situations in which a promising event delivers misery. As an example, consider the following excerpt from August Wilhelm Schlegel (Friedrich Schlegel’s brother), who sees Shakespeare as presenting an “Irony of Events” in *King Henry V*:

---

<sup>66</sup> In more contemporary linguistic theory, Levin (1982) proposes to distinguish between irony as a trope and irony as a figure (of thought). In the former case irony is focused on a word, and the relationship is that of antonymy. In the latter, however, irony is focused on a sentence, and the relationship is that of negation. Although some scholars (e.g., Haverkate 1990) make similar claims, this or any kind of trope-figure distinction is not significant/frequent in the Anglo-Saxon literature on irony.

After his renowned battles, Henry wished to secure his conquests by marriage with a French princess; all that has reference to this is intended for irony in the play. The fruit of this union, from which the two nations promised to themselves such happiness in future, was the weak and feeble Henry VI, under whom everything was so miserably lost (Lectures on Dramatic Art and Literature [1809-11] – translated by John Black, 1861: 432).

The German poet, translator and novelist Johann Ludwig Tieck also finds irony in Shakespeare's plays. In *King Henry IV*, for example, the prince, at his father's deathbed, puts the crown hastily on his head. For Tieck, this represents a deep irony, especially because Prince Hall mistakes his father's sleep for the sleep of death.

As Muecke notes, later, any accidental or unintentional juxtaposition of opposites was regarded as irony. In his 1821 book, the German physician and naturalist Gotthilf Heinrich Schubert, for example, saw irony as a naturally occurring incongruity, such as, for instance, "in the natural scale of rational man and absurd ape" Muecke ([1970] 1982: 21). The most significant attribute of these juxtapositions was the *appearance* of "design".

The next step in the development of the concept of irony was the "universalization" of (the local and particular) ironies. This involved the elevation of the ironies of events to 'metaphysical dignity'. That is, some mocking, capricious, hostile or indifferent deity or destiny was thought to stand behind those "accidents". In 1833, the English bishop and historian, Connop Thirlwall, for instance, admits in his article *On the Irony of Sophocles* that "the contrast between man with his hopes, fears, wishes, and undertakings, and a dark inflexible fate, affords abundant room for the exhibition of tragic irony".

The idea to use the word 'irony' in the context of viewing life as irremediably flawed or even contradictory first occurred to the Romantics. As is indicated above, August Wilhelm Schlegel considers irony in terms of Shakespeare's awareness of the influence of *selfish* motives in human nature. The irony for him is represented both in Shakespeare's "dexterous manoeuvre" and in his "ironical view" of human relations. As Muecke observes, Schlegel, however, does not "take the further step of seeing as 'objectively' ironic the fact that men are a mix of contradictory qualities" ([1970] 1982: 22).

Finally, Thirlwall's contribution to the history of irony should be outlined in more detail: first, since he was familiar with German criticism, he transferred much of its terminology to English. Second, although Thirlwall does not use the term, he is considered to be the forefather of 'dramatic irony'. In his essay "*On the Irony of Sophocles*" Thirlwall makes a distinction

between two types of irony: irony as understood across the board, and a more complex form that he wishes to expound. Consider the following passage:

Some readers may be a little surprised to see *irony* attributed to a tragic poet. ... We must begin with a remark or two on the more ordinary use of the word, on that which to distinguish it from the subject of our present enquiry, we will call *verbal irony*. This most familiar species of irony may be described as a figure which enables the reader to convey his meaning with greater force by means of a contrast between his thought and his expression, or to speak more accurately, between the thought which he evidently begins to express, and that which his words properly signify (1833: 483).

Although much of Thirlwall's discussion of particular plays concerns verbal irony almost exclusively, he distinguishes it from what he calls "practical irony". He characterises this type as one which is independent of all forms of speech, and which does not need the "aid of words", since it entails a contrast between events and their interpretation. As Dane explains, Thirlwall "has done no more than extended the notion of verbal irony into the nonverbal realm" (2011: 127).

The most striking form of practical irony is not given a particular name by Thirlwall, but could be termed "judicial irony" – the irony of the judge (cf. Dane 2011):

There is always a slight cast of irony in the grave, calm, respectful attention impartially bestowed by an intelligent judge on two contending parties, who are pleading their causes before him with all the earnestness of deep conviction, and of excited feeling. What makes the contrast interesting is, that the right and the truth lie on neither side exclusively: that there is no fraudulent purpose, no gross imbecility of intellect, on either: but both have plausible claims and specious reasons to alledge, though each is too much blinded by prejudice or passion to do justice to the views of his adversary. For here the irony lies not in the demeanor of the judge but is deeply seated in the case itself, which seems to favour each of the litigants, but really eludes them both (1833: 489-490).<sup>67</sup>

---

<sup>67</sup> For discussion of further types of practical irony (for example, instrumental and observable irony), see Muecke ([1970] 1982).

According to Dane (2011), this appears to be the most innovative part of Thirlwall's essay in spite of the fact that Thirlwall applies the judicial conception of irony only in his discussion of the Antigone.

Besides verbal and practical irony, Thirlwall defines a third type, which he calls "dialectic irony". This form has nothing to do with his discussion of drama. Although it is associated with Plato, Thirlwall's language seems to be indebted to the Romantics, and some concepts he uses correspond to those pertaining to practical irony:

There is however an irony which deserves to be distinguished from the ordinary species by a different name, and which may be properly called *dialectic irony*. This, instead of being concentrated in insulated passages, and rendered prominent by its contrast with the prevailing tone of the composition, pervades every part, and is spread over the whole like a transparent vesture closely fitted to every limb of the body (1833: 484).

The metaphor at the end of the above quote indicates that Thirlwall could be referring to an "all-pervasive" irony. However, he actually means something different:

The writer effects his purpose by placing the opinion of his adversary in the foreground, and saluting it with every demonstration of respect, while he is busied in withdrawing one by one all the supports on which it rests: and he never ceases to approach it with an air of deference until he has completely undermined it, when he leaves it to sink by the weight of his own absurdity. Examples of these species are as rare as those of the other are common. The most perfect ever produced are those which occur in Plato's dialogues (1833: 484).

Dane (2011) suggests that Thirlwall considers Socratic irony only in a limited sense. In the Meno, for example, it is not in Socrates' intention to demolish arguments. Furthermore, Thirlwall does not seek to incorporate his understanding of Socratic irony into his notion of dramatic irony.

To Thirlwall, irony always incorporates a level of "superior understanding", on which a man "may often find himself compelled to assent to propositions which he knows, though true in themselves, will lead to very erroneous inferences in the mind of the speaker" (1833: 486).

As Dane (2011) explains, although Thirlwall's direct influence on modern conceptions of dramatic irony is tenuous, his indirect effect lies in his notion of 'the man of superior understanding'. This man could be the poet, a judge or a critic. When Thirlwall refers to "indirect judges of such matters", he has in mind the most eminent German critics of the time: Johann Winckelmann, Gotthold Lessing and Johann Gottfried von Herder.

Dramatic irony involves an audience, which, for Thirlwall generally means the *readers* of plays. It is with the first mention of the 'spectator' in his discussion of Oedipus Rex that a concept which is similar to the modern notion of dramatic irony is set forth:

During this pause the spectator has leisure to reflect, how different all is from what it seems. The wrath of heaven has been pointed against the afflicted city, only that it might fall with concentrated force on the head of a single man; and he who is its object stands alone calm and secure: unconscious of his own misery he can afford pity for the unfortunate: to him all look up for succour: and, as in the plenitude of wisdom and power, he undertakes to trace the evil, of which he is himself the sole author, to its secret source (1833: 496).

In the above passage Thirlwall expresses the contrast between the understanding of the spectator and that of the character in the tragedy – a contrast on which modern theories of dramatic irony are based.

In sum, Thirlwall's contribution to the history of irony is significant: first, he introduced into English the various concepts of irony found in German writers. Second, he made some insightful observations about three types of irony: verbal, dialectic and practical. Finally, the modern notion of dramatic irony develops from Thirlwall's observations, in which "irony in drama" or "irony in tragedy" are interpreted as referring to a particular type of irony, in which a character's utterance has a double reference: to the situation as it appears to him, and to the situation as it really is – the very different situation already revealed to the audience.

As is noted in Muecke ([1970] 1982), if in the post-Romantic 19<sup>th</sup> century the dominant concept was that of 'nihilistic irony', the dominant concept in the 20<sup>th</sup> century seems to be that of an irony which is 'relativistic' and 'non-committal' in nature. As Hynes explains in terms of Thomas Hardy's poetry, irony is a "view of life which recognized that experience is open to multiple interpretations, of which no *one* is simply right, and that co-existence of incongruities is part of the structure of existence" (1961: 41-42). According to Muecke, this definition also

opens the way to relativism and to a concept of irony which hardly distinguishes it from ambiguity.

In contrast to the 18<sup>th</sup> and 19<sup>th</sup> centuries, in the 20<sup>th</sup> century irony appeared outside the purview of mainstream philosophical thinking, and became the subject of various forms of scientific and intellectual discussion. Knox (1973), for instance, suggests that Freud compared irony to dream, since he believed irony was a defence mechanism in which the ego turned the object into its opposite. Irony has also been used as a model for analysing history (c.f. Knox 1973), and has even been investigated in music. Monson (1994), for example, discussed several instances of musical irony which are characterised in terms of “repetition with a difference” (c.f. also Shelley 2001).<sup>68</sup>

Drawing on the classical tradition of irony as well as later developments of the concept, the 20<sup>th</sup> century has also witnessed the emergence of irony’s linguistic consideration. The next section gives a detailed account of the most definitive, modern theories of irony, and shows that those models run into difficulty in explaining certain ironic manifestations. Therefore, it proposes that instead of providing an umbrella definition of irony, finding commonalities in the representation of different examples may be better worth the effort.

## 6.2 En Route to a Blending Explanation of Irony

Although most people produce and understand ironic language quite naturally, without having to expend much conscious effort, some might encounter difficulty in defining it. This may, however, come as no surprise, for at least three reasons. First, irony has a broad range of functions: ‘to express some negative evaluation’ is perhaps the most frequently mentioned discourse goal for irony, as in “*What a gorgeous day*” (uttered during a rainstorm). In other cases, an ironic utterance could also express humour, as when a wife intends to surprise her husband with her new hair-do and, on arriving home, says to her spouse: “*I went to the hairdresser’s this afternoon, my dear*”. In reply, the husband asks with a smile on his face: “*Did you? Er ...was it closed, darling?*”. Such versatile phenomena are most often difficult to grasp by a single definition (for discussion of the various pragmatic uses of irony, see, for example, Attardo 2002; Ito and Takizawa 1996; Kreuz and Caucci 2009; Kreuz et al. 1991; Long and Graesser 1988; Roberts and Kreuz 1994). Second, as Gibbs and O’Brien (1991: 529) argue, “people do not need to recognize irony to understand what speakers mean by their use of such

---

<sup>68</sup> For a detailed discussion of irony in the music of the late-Romantic Austrian composer Gustav Mahler, see Johnson (2009).

statements". That is in the dynamic, on-line and mostly subliminal process of speech comprehension, the job of the listener is to recover the enunciator's intentions and discourse goals rather than to identify, by name, some label like 'irony', 'metaphor' or 'metonymy' (see also Attardo 2002; Kreuz 2000). This is the reason why an actual occurrence of ironic language is seldom brought to awareness and labelled as 'irony'. It should be noted, however, that this lack of awareness (of ironic turns) does not mean that people (including even children of a very young age) do not develop any concept of irony. Even preschoolers (5–6 years of age) begin to understand ironic utterances (Dews et al. 1996) without necessarily being aware that it is actually tagged as 'irony'. Finally, as Barbe (1995: 71) claims, "there are no signals that can be considered purely signals of irony".<sup>69</sup> The lack of such unambiguous criteria for this phenomenon may also add to the difficulty of providing a proper definition for irony (see also Rorty 1989).

This chapter discusses irony from three perspectives: (1) irony as a 'scholarly term', (2) irony as a 'folk concept', and 3) irony as a matter of conceptual integration. The linguistic examination of irony was given impetus by the development of Gricean pragmatics in the mid-1970s. In the 1980s and 1990s, a number of (scholarly) theories were constructed in the hope of providing general, all-embracing explanations for this figurative phenomenon: for example, Clark and Gerrig (1984) argue that an ironist is pretending to be an injudicious person speaking to an uninitiated audience. However, as the chapter shows, most of those models do not explain irony across the board. Thus, the dissertation proposes that providing an umbrella definition of irony may be a challenging scientific exercise. Therefore, instead of trying to build a model to satisfy all manifestations of irony, an alternative way of treating this figurative phenomenon is considered: irony is treated as a 'folk theory'. That is, it is assumed that most adult language users have some concept of 'irony' and that people with common socio-cultural experience might occasionally consider certain utterances 'ironic'.

However, treating irony as a folk theory does not preclude the possibility of finding attributes that are common across (all) examples of irony. To this end, specific ironies are examined in terms of a particular criterion: if irony is also regarded as a matter of thought (rather than as a strategy of communication, for example), then the features that relate examples of irony should primarily be sought at the conceptual level of organisation.

---

<sup>69</sup> On the contrary, Kreuz and Roberts (1995: 22) argue that "the use of verbal irony in discourse is marked by a number of distinct paralinguistic features". One such attribute is the 'ironic tone of voice'. The different studies, however, are not unanimous in this respect. Bryant and Fox Tree (2005), for instance, were unable to identify an ironic tone of voice.



Before discussing irony in a conceptual integration framework, let us set significant parameters for the discussion of irony in the dissertation. This incorporates the classification of irony and the irony–sarcasm distinction.

### 6.3 Types of Irony

In the literature most taxonomies of irony make a distinction between four types:

- Socratic irony
- Dramatic irony
- Situational irony and
- Verbal irony.

Socratic irony (as will be discussed shortly in more detail) refers to the rhetorical technique of pretending ignorance to reveal a flaw in the thinking of another (cf. Beckson and Ganz 1989). As an example, taken from Kreuz and Roberts 1993, a law professor might ask his students a series of seemingly genuine questions to get them to realise that they do not understand some point of law. An important aspect of Socratic irony is the notion of pretense; the speaker knows the answer but acts as if he did not.

Dramatic irony involves a contrast between what the audience knows to be true and what the character perceives to be true. In this type of irony the character cannot see or understand the discrepancy, but the audience or reader can. For instance, in Shakespeare's *Othello* dramatic irony occurs when Othello refers to Iago as “honest Iago”. Unknown to Othello, however, Iago is a villain who deceives him into thinking that Desdemona (Othello's wife) has been unfaithful. For this, Othello kills his wife, believing the whole time in Iago's honesty. In this example, irony is between the author and the audience. Othello, the speaker, is not included. This author-audience involvement is a general attribute of dramatic irony.

Situational irony (also termed as ‘irony of fate’) refers to “a state of world which is perceived as ironical” (Attardo 2000a: 794). For example, when a fire station burns down to the ground (see also Lucariello 1994; Shelley 2001).

Finally, in the literature verbal irony is generally referred to as a figurative use of language that is used to express something different; usually the opposite of what is literally stated by the speaker (Curcó 2000; Grice, 1975, 1978; Haverkate 1990; Kreuz and Roberts 1993; Reyes et al. 2013). Although this definition can be criticised on various grounds (see Section 5.5), in its discussion of ironic representation the dissertation is primarily concerned

with what is generally termed ‘verbal irony’. Besides this type, (an example of) situational irony will also be considered. Little will be said on Socratic and dramatic irony, since discussion of their cognitive representation is not the concern of the dissertation.

#### 6.4 Irony vs. Sarcasm

In the literature there is no general agreement as to whether or not irony and sarcasm are essentially the same phenomenon. Rundquist, for example, notes that “there does not appear to be a consensus on how to determine whether an utterance is ironic or sarcastic” (1991: 26). According to Attardo, one reason for this is “the fact that in some varieties of English, the term *irony* is undergoing semantic change and is assuming the meaning of an unpleasant surprise, while the semantic space previously occupied by *irony* is taken up by the term *sarcasm*” (2009: 405–406).

There are two basic approaches that scientists alternatively adopt in their discussions of the irony-sarcasm distinction: one group of researchers regard irony and sarcasm as being identical and interchangeable (c.f. Jorgensen et al. 1984).

A large number of scholars, however, make specific distinctions between the two: Haiman (1990, 1998), for example, claims that irony does not require the intention of the speaker, whereas sarcasm does. Haiman also notes that “situations may be ironic, but only people can be sarcastic” (1998: 20). That is, only irony (but not sarcasm) may be situational.<sup>70</sup> Further, Schaffer (1982) made reference to *different* verbal cues of irony and sarcasm. Another (type of) distinction was made by Barbe (1995), who explained that sarcastic utterances differ from ironic ones in the following respects: 1) sarcastic speech is more personal; 2) sarcastic potential is immediately obvious to all the interlocutors in a situation – that is, shared knowledge/experience is not a necessary factor and 3) sarcastic utterances have a face-saving capacity only for the *hearer* (and not for the speaker).<sup>71</sup> Finally, as Attardo (2000a) claims, perhaps the strongest claim for making a distinction between irony and sarcasm was presented by Brown (1980), who notes that a teacher who writes “*Nice cover-F*” on a student’s essay, in case he really/actually likes the cover,<sup>72</sup> is being sarcastic but *not* ironic. Kreuz and Glucksberg (1989) concur with this idea. So does Gibbs (1986), who suggests that sarcasm (but not irony) depends for its effect on *bitter*, caustic language that is usually directed against an individual.

<sup>70</sup> For a discussion of situational irony, see Section 6.3.

<sup>71</sup> For more details and examples, see Barbe (1995).

<sup>72</sup> This example should be interpreted in the following context: a university student hands in an essay with a decorated front page. Although the teacher praises the cover, he does not appreciate the content – as is indicated by the capital “F” (fail).

A similar idea is entertained by Nunberg, who notes that with irony the speaker is “winking at” a listener, while with sarcasm the speaker “sticks out his tongue” (2001: 91).

A number of scholars (e.g., Gibbs 1993; Rockwell 2000; Uchiyama et al. 2012; Shamay-Tsoory et al. 2005; Winner et al. 1987) relate sarcasm and irony in a more direct and straightforward manner: they regard sarcasm as a “form of irony”. However, in general, they distinguish irony and sarcasm only by attributing ‘bitterness’ to sarcasm (and not to irony).

Whether or not irony and sarcasm are essentially one phenomenon or if they should be distinguished by intentionality or perlocutionary effects like ‘scorn’ or ‘bitterness’ is not relevant to the discussion (of irony) in the dissertation, especially because the blend-based model of irony which Chapter 7 proposes will be demonstrated using items that ordinary language users find *ironic*. This is the only criterion that those examples should fulfil. Whether or not they are considered manifestations of sarcasm as well does not have any significance for the purposes of the dissertation.<sup>73</sup>

### 6.5 More Contemporary Theories of Irony: The Traditional Pragmatic View

In linguistics, irony returns as a topic with the Gricean theory of inferences in the 1970s. According to the Standard Pragmatic Model (Grice 1975, 1978), in the representation of irony, the ‘decoder’ (i.e., the hearer) first needs to process the literal meaning of the ironically intended remark. Then, this meaning is tested against the context. Once the hearer has realised that there is an apparent violation of the maxim of quality (“Do not say anything you believe to be false or for which you lack adequate evidence”), he needs to find some alternative (“non-literal”) interpretation. The process to retrieve the intended meaning involves inferential reasoning in which the hearer infers the *opposite* of what the speaker has literally said.

There are, however, several objections to this theory. First, as Sperber and Wilson (1981) have shown, irony need not violate the Gricean maxim of quality. Consider, for instance, Gibbs and O’Brien’s (1991) example, in which a mother says “*I love children who keep their rooms clean*” upon seeing her son’s messy room. In this irony, there is no need to assume a breach of quality because the mother expresses a statement she believes in (Utsumi 2000).<sup>74</sup>

---

<sup>73</sup> The term ‘ironic (and *not* sarcastic) representation’ is legitimate on the grounds that most examples this dissertation analyses in Chapter 7 are most often regarded in the literature as cases of *irony* rather than as examples of sarcasm.

<sup>74</sup> Note, however, that Günter Radden (personal communication, 2012) describes the above situation in a rather different way: the mother expresses a general statement about children, which she believes in, but wants it to be applied metonymically to the specific situation involving her son. In Radden’s view, in the metonymic and intended reading, the maxim of quality *is* violated.

Second, an ironic speaker might not mean *the opposite* of what he says, as in “*It seems to be a little windy*” (uttered during a fierce storm). In this example, the speaker might be saying *less* than what is actually meant (Attardo 2009). In a similar fashion, irony may manifest itself in the form of overstatements and hyperboles (Kreuz and Roberts 1995). Third, it can occasionally be difficult to define the exact opposite of an ironic utterance. The reasoning in this dissertation is different from that in the literature, as the potential multiplicity of ironic ‘meanings’ will be justified through making a distinction between the predicate- and the propositional negation of the literal meaning of an ironic remark. Before delving into the analysis, however, let us consider the origin of such an approach (Haverkate 1990) and the difficulties that source might possibly encounter.

### 6.5.1 Haverkate on the Opposite of What is Literally Said: A Review

In an attempt to refine the traditional view of irony in relation to ‘oppositeness of (literal) meaning’, Haverkate (1990) aims to specify the type of negation that brings the hearer closer to the intended (figurative) meaning. For his purposes, the author analyses the following example:

(36) Well, a charming couple you are! (said ironically to a couple who live together but do not speak to each other)

Haverkate argues that in order to properly analyse the opposite meaning(s) of (36), it is necessary to distinguish cases of semantic opposition, in which a) the proposition is negated (as in (36a)), or b) the predicate or one of its components is negated (as indicated in (36b)):

(36a) Well, you are not a charming couple!

(36b) Well, you are a boring couple!

As Haverkate explains, in (36a) the negation affects the whole proposition, establishing a logical opposition with the affirmative proposition of (36). As opposed to this, in (36b) the predicate ‘boring couple’ does not form a logical but a lexical opposition with the corresponding

---

In another view, Péter Pelyvás (personal communication, 2015) considers this example a violation of the maxim of relevance: what contributors say should be pertinent to the discussion/situation. Pelyvás also states that the example “*It seems to be a little windy*” may also violate the maxim of quantity, stating that interlocutors in a conversational exchange should be as informative as possible and should give as much information as is needed, and no less or more.

predicate of (36). Further, what (36a) literally expresses is simply that the speaker does not have a positive impression of the interpersonal relation of his interlocutors. Therefore, since (36a) does not reflect a critical evaluation on the part of the speaker, irony is not expressed in that negation. On the other hand, as ‘boring couple’ explicitly specifies the criticism of the speaker, (36b) can be considered the opposite (of (36)) that establishes an ironic interpretation.

The conclusion Haverkate reaches is that in order to properly analyse the figurative implication of assertions such as (36), the opposite of what is literally said should *not* be interpreted in terms of propositional negation. Rather, in those cases, irony might be better understood in relation to the opposite lexical meaning of the predicate.

Haverkate’s suggestions, however, run into the following difficulties: he suggests that, since “*Well, you are not a charming couple*” does not express a negative evaluation, it cannot be considered a non-ironic paraphrase of (36). This assertion may not be true since (36a) can also have an “ironic meaning”. In this case, however, the irony comes from the fact that the ironic remark in (36) induces a conflicting conceptual organisation on the part of the comprehender: it goes against our folk understanding (of marriage) that a couple who do not speak to each other should be considered ‘charming’. This very conflict alone then drives the hearer to understand (36) as a figurative statement.

Second, Haverkate argues that “*Well, you are a boring couple*” can be considered a non-ironic paraphrase of (36). The definition of meaning (in the semantic sense) is admittedly highly theory-dependent but no matter how it is defined, apart from Haverkate perhaps no semanticist would argue that the meaning of the word ‘charming’ changes to something like ‘boring’ when used ironically. (This is in contrast to the case of, for example, metaphor, when the meaning of, say, ‘defend’ can really be argued to be different in ‘defend a fort’ and ‘defend a dissertation’.) Thus, it may not be reasonable to propose that in the ironic use of ‘charming’ the inference that the couple is ‘boring’ is actually communicated by the speaker.

### 6.5.2 Predicate- and Propositional Negation, and the Representation of Irony

The previous section showed that irony was discussed in terms of different sorts of negation even in the 1990s. In contrast to Haverkate (1990), however, the intention of the dissertation is not to affirm that only *one* type of opposition (the predicate but not the propositional) plays a part in the representation of irony. Furthermore, Haverkate discusses the opposite of predicates in terms of lexical meaning, arguing – quite mistakenly – that the meaning of ‘charming’ *changes* to something like ‘boring’ when used ironically. Rather, the dissertation shows that the

understanding of ironic statements can occasionally be interpreted in relation to *both* the predicate- and the propositional negations of the speaker's words. The claim that ironically intended remarks may have multiple opposites provides an arena to criticise the Standard Pragmatic Model of irony, which presumes (the existence of) only one such meaning: the opposite of the literal.

As a starting point for the discussion of the versatile nature of opposite meaning of ironically intended remarks, let us consider Lyons (1995), who suggests that predicate negation is obviously not equivalent to the negation of the whole proposition. Consider (37) below, whose potential opposites are presented in (37a) and (37b):

(37) John is friendly.

(37a) John is not friendly. (contradictory to John is friendly)

(37b) John is unfriendly. (contrary to John is friendly)

While (37a) describes the *passive* absence of a positive attribute, in (37b) John is actively hostile, as opposed to merely refraining from acting in a friendly way.

According to Lyons (1995), (37b) expresses a proposition that is not just the 'contradictory' of the proposition expressed by "*John is friendly*" but its 'contrary'. Hence, (37b) above is not simply the negation of (37); it means, as stated, that John is actually malicious. Furthermore, in standard logical terminology, one proposition is the *contradictory* of another if it is impossible for both of them to be true and for both to be false. One proposition is the *contrary* of another if both cannot be true, though they may both be false at the same time. Thus, the relation between (37) and (37b) is one of contrariness since (as opposed to the relation between (37) and (37a)) in this case both may be false. That is, it is quite possible for John to be neither friendly nor unfriendly (Lyons, 1995). This means that John may refrain from acting in a friendly way though he may not be actively hostile. Let us now examine (37) as it is said in a particular situation, analyse its semantic and pragmatic attributes in context and see how these two sets of features are related.

Imagine a scenario in which Tom and Pete are close friends. One day, a new neighbour (John) is about to move in the flat which is adjacent to Pete's. Tom happens to know the newcomer and says to Pete: "*You need not worry, John is friendly*". However, after a couple of weeks Tom meets his friend again, and the following exchange occurs:

(38) Tom: Hi Pete, how's things?

Pete: Don't ask!

Tom: What's the matter?

Pete: My new neighbour ... you know ...

Tom: No. What?

Pete: ... that John. Last time you told me that he was a good guy. Well, he is friendly.  
(said in an ironic tone)

Tom: Is he giving you grief?

Pete: Is he ever! He refuses to trim the hedge on his boundary with us and it is blocking the sunlight from my vegetable patch. Up until now he has just ignored me but this morning he started throwing insults and threats!

Tom: Oh dear!

From the beginning of the conversation it might be obvious to Tom that Pete is disappointed about the new neighbour. However, when Pete says in an ironic tone that “*Well, he is friendly*”, without providing any further details, Pete's remark (depending on whether the predicate or the proposition is negated) could be pragmatically ‘noisy’, since it is fairly ambiguous between its active and passive understandings: hostility, and (simply) lack of a positive attribute (that is, friendliness), respectively. Thus, one reason Tom asks further questions might be to know in what sense Pete is using the irony. In other words, Pete's ironic remark shows use of an opposite meaning in that both the passive absence of a positive attribute (i.e., propositional negation) and the idea of hostile behaviour (i.e., predicate negation) could be considered potential opposites of ‘friendly’; these negations might constitute what is generally called ‘**pragmatic implication**’. The Standard Pragmatic Model, however, cannot explain this example of irony, exactly due to the multiplicity of opposite meanings.

A consideration of the differences between the direct, scalar negation of propositions and the non-scalar negation of predicates provides further evidence in support of the multi-dimensional nature of ‘the opposite’:

(39) The coffee is hot.

(39a) The coffee is not hot.

(39b) The coffee is cold.

While (39b) expresses the diametric opposite of what we normally mean in (39), the negated proposition ‘not hot’ in (39a) generally means ‘less than hot’ rather than ‘cold’ (see also Horn 1989). That is, as Giora (1995) argues, direct negation (‘not hot’) invokes weaker interpretations whereby only one value on a spectrum (that is ‘hotness’, in this case) is negated while “the rest [value in the set] is affirmed” (Giora 1995: 241) that is, left open to interpretation.

However, it should be noted in passing that Giora (1995) seems to be confused in her explanation, since her reasoning that in case of direct negation (not hot) the core proposition (that is, that the coffee is ‘hot’) is discredited and that “the rest is affirmed” (where the domain of discourse extends all along to ‘cold’, in my view) implies that ‘the coffee is cold’ is also included as a possible opposite interpretation of (39a). In a rather inconsistent fashion, however, Giora (1995: 241) argues that “the explicitly negated expression [hot] functions as the central member of the set whose negation allows for the less central [or approximate] members [*but not the distant marginal ones*, as Giora also explains] to take over”. That is, in Giora’s view, the ‘distant marginal interpretations’ are discredited as possible understandings when a statement is explicitly negated. In this view, the interpretation of (39a) excludes the slightest possibility that the coffee could by any chance be ‘cold’. Giora could be discredited on this point since in such continuums, although ‘not X’ does not necessarily imply ‘Y’, it does *not* exclude ‘Y’ either. Thus, ‘not hot coffee’, for instance, *can* be ‘cold’, but not simply by virtue of being not ‘hot’.

Despite the above obscurity in Giora’s explication on negation, this dissertation sees the following approach (which can also be deduced from Giora’s discussion of ‘the opposite’) as worthy of note: the opposite of scalar concepts can, occasionally, be accomplished in at least two different ways: via direct (or propositional) negation (not hot) and through predicate negation (cold). This is a dichotomy that any theory operating along the notion of opposite meaning should not leave unaccounted for.

Consider the following situation in which Mike invites his colleague, Jane, for a cup of hot black coffee from a vending machine. Mike does not drink coffee, he drinks iced tea. There seems to be some problem with the machine but they do not know. When Jane’s coffee turns out to be anything but hot, the following exchange occurs:



(40) Jane: Mike, you promised a cup of [hot] black coffee. (emphasis added to ‘hot’)

Mike: Yeah. What’s up with it?

Jane: It’s really hot. (in an ironic, playful tone)

In the above situation, the coffee is probably not to Jane’s liking. The ironic “*It’s really hot*”, however, might not indicate to Mike whether the coffee is cold or if it is somewhere between the two extremes of the temperature spectrum. Thus, this example of irony might make use of opposite meaning in the sense that both ‘cold’ and ‘lukewarm’ could be considered potential opposites of ‘hot’. However, because the opposite of “*It’s really hot*” can be interpreted in terms of *both* its predicate- and its propositional negation, Mike may have trouble understanding the speaker’s words exactly (even if the irony is observed). Because Jane’s utterance may have more than one opposite, the Standard Pragmatic Model has difficulty explaining this example.

Another principle to consider in determining ‘the opposite’ of an ironically intended remark in terms of its predicates and propositions concerns the specification of the ‘schema’ used for encoding negations. Take the following example:

(41) Tom is not guilty.

There seem to be (at least) two alternate theories, working under different assumptions, that explain the representation of (41). According to the ‘schema-plus-tag’ model (Clark and Chase 1972), the core supposition (“*Tom is guilty*”, in our case) is processed as a cognitive unit, which is then marked with a negation tag, resulting in (41) above.

The ‘fusion’ model (see, for example, Horn 1989; Lyons 1995), on the other hand, states that the core of a negated message and the negation marker are integrated into one meaningful unit, thus transforming the negation into an affirmation. Hence, the message in (41) may be transformed into its affirmative counterpart and coded as:

(42) Tom is innocent.<sup>75</sup>

The nature of the inferences that are facilitated by these competing models is different. The schema-plus-tag model assumes that “*Tom is not guilty*” is processed within the schema referring to the negatively biased core supposition, ‘guilt’. In contrast, according to the fusion model, a negation-congruent schema (‘innocence’) is activated. This distinction is highly significant, since, as Mayo et al. (2004: 435) argue, “not only do the two schemas have opposite meanings, they are also embedded in markedly different associative networks”.

This dissertation assumes that opposite meaning might play some role in the representation of ironic examples like “*Tom is guilty*”. However, there is evidence that the negation of this example presupposes at least two different processing mechanisms: one proceeding along the cognitive model of ‘guilt’ and one along the positive associative network of ‘innocence’. Without addressing this duality in an experimental setting, however, one could only guess which of the two negations is activated in the comprehension process – and any such speculation is beyond the scope of this dissertation. Thus, in some cases the Standard Pragmatic Model does not explain the parameters and conditions underlying the activation of the different processing schemas that give the essence of the emergent meaning.

In sum, this section has shown that earlier attempts at discussing irony in terms of predicate- and propositional negation should be revised, since irony should not be discussed *only* in relation to the negation of the predicate (of an ironic utterance). That is, the opposite meaning of an ironically intended remark can occasionally be interpreted in relation to *both* the predicate- and the propositional negations of what an ironist says. As a result, the assumption established by the Standard Pragmatic Model that ‘an ironic speaker means the opposite of what he says’ should be considered with care and caution.

## 6.6 The Most Influential Theories of Irony of the 1980s and 1990s

To offer a usable compilation of the incredible history and diversity of theories that emerged in the 1980s and ‘90s is an impossible task. This dissertation thus limits the scope to the most

---

<sup>75</sup> Mayo et al. (2004) have made a start in this direction of research and found that when a schema that accommodates the meaning of the original negation is not readily available (as, for example, in “*Peter is responsible*”), a negated message facilitates negation-incongruent associations, in line with predictions of the schema-plus-tag model. When receivers, on the other hand, have a schema to accommodate the meaning of the negation as a whole (as in “*Kate is honest*” where, as a result of its being bi-polar, the concept of ‘honesty’ inherently includes the opposite in the form of the negative associative network of ‘dishonesty’), the negation should be encoded in line with the fusion model.

definitive accounts. However, since a great many scholars published important works during these two decades, even such a narrowing does not make full coverage possible.

The first radical alternative to the oppositional models was provided by Sperber and Wilson (1981). In their Echoic Mention Theory, which was later reconsidered as ‘echoic interpretation’ (Sperber and Wilson 1986[1995], 1998; Wilson and Sperber 1992), they claim that irony should not be explained in terms of the substitution of literal meaning for non-literal one. Rather, in an ironic exchange, the listener is *reminded* echoically of some familiar proposition and of the speaker’s attitude towards it. As Sperber and Wilson (1981) explain, the source of echoes does not necessarily need to be attributable to particular individuals or utterances; sometimes they have a vague origin. Echoes can also point to thoughts or generally held opinions. As an example, consider a situation in which Bob has not helped Ben in doing some task and Ben says to Bob “*You are a big help*”. In this statement Ben echoes some previously mentioned statement in which Bob promised Ben that he would help. Alternatively, Ben’s ironic remark may also refer to a belief or an unspoken agreement between the interlocutors. That is, there might have been an earlier offer on the part of Bob that he would help Ben, or it may be Bob’s obligation to do so. In any way, Ben’s ironic remark “*You are a big help*” is echoing a previous statement or referring to a mutually shared expectation or belief that Bob is supposed to help Ben as part of his job.

As Clark and Gerrig (1984: 125) argue, “the mention theory appears at first to solve the most obvious problem about ironic utterances – that speakers are not really saying what they appear to be saying”. Furthermore, echoic mention is supported by a great deal of psycholinguistic evidence. Gibbs (1986), for instance, has shown that ironies that echo a previously expressed idea are understood more quickly than those that do not. Sperber and Wilson’s account is also supported by findings that positive utterances (such as “*He is friendly*”) are more readily considered ironic than negative ones (Kreuz and Glucksberg 1989). That is, blame-by-praise ironies (for example, “*He is friendly*”) are easier to process, since social norms are generally positive and can be echoed implicitly. On the contrary, there is more of a need for an explicit echo in appraise-by-blame irony (as, for instance, when a mother says to her child ironically that “*You are so dirty*”); otherwise such an utterance could not be taken as implicit praise.

There are, however, several weak points in this account of irony. One of the best articulated objections is that not all ironic utterances are echoic (as shown by, for instance, Clark and Gerrig 1984; Gibbs and O’Brien 1991; Giora 1995; Kreuz and Glucksberg 1989; Kumon-Nakamura et al. 1995; Utsumi 2000). As an example, “*Another gorgeous day*” uttered

when it has been grey and rainy for days, need not echo anyone's utterance or thought. It may simply allude to a generalised expectation for good weather (Kreuz and Glucksberg 1989).

In an attempt to address what they regard as the deficiencies of the echoic conception, Clark and Gerrig (1984), inspired by the original Gricean remark that irony is a case of "making as if to say" something, have presented a theory of irony as 'pretense'. They claim that the speaker is not himself performing a speech act but "pretending to be an injudicious person speaking to an uninitiated audience" (Clark and Gerrig 1984: 121). To illustrate, an ironist who says "*See what lovely weather it is*" is pretending to be an unseeing person (perhaps a weather forecaster), exclaiming to an unknowing audience how beautiful the weather is. The speaker intends his audience to see through the pretense and to realise that he is actually ridiculing the kind of person who would accept it and the exclamation itself. In a reconsidered version of the Pretense Theory (Clark 1996), irony is viewed as 'joint pretense'. This conception assumes an imaginary situation (rather than an imaginary person), in which the speaker and the hearer mutually share in the pretense.

Clark and Gerrig's account represents an advance over echoic mention in its ability to account for patently absurd ironic texts<sup>76</sup> and claims that some ironies are impossible to explain without the notion of 'pretense'. In their words, "in some of the most effective examples of irony, the audience is intended to be taken in at first and to catch on only as the pretense is developed" (Clark and Gerrig 1984: 125).

However, Utsumi (2000), among others, argues that pretense is not a sufficient property of irony. Moreover, as pointed out by Kreuz and Glucksberg (1989), the notion of 'pretense' is too powerful for an adequate theory of irony in that it can apply to all indirect speech acts. Finally, Giora et al. (2005) doubt that the joint pretense view could account for the degree of irony.

As an extension of the echoic conceptions, Kreuz and Glucksberg (1989) propose their Echoic Reminder Theory. They claim that not all ironies are echoic mentions and that an ironic utterance need only allude to (or remind one of) an antecedent event, such as implicit (or social) norms and shared expectations. The purpose of irony is to make a listener realise the discrepancy between what is and what should be, and to express the speaker's disapproval towards the situation. For example, when a mother enters her son's untidy room and says to her son "*I love children who keep their rooms clean*", she may be simply alluding to her expectation or desire for her son to clean up his room.

---

<sup>76</sup> For an illustration of such an analysis, see Clark and Gerrig (1984).

As Kreuz and Glucksberg (1989: 384) argue, the Echoic Reminder Theory “applies to those cases in which neither mention nor pretense is involved”. Consider the following example in which a mother, in making a request, is being stylistically inappropriate (excessively polite) to her daughter:

(43) Would you very much mind if I asked you, please, to perhaps consider cleaning up your room sometime this month?

Kreuz and Glucksberg argue that the statement in (43) is a case of *use* rather than mention. That is, instead of echoing the thoughts, beliefs and attitudes of some other person (see the Echoic Mention Theory above), the speaker in this example “reminds – in the sense of calling attention to – the speaker’s attitude towards the listener’s own customary attitudes and behaviors” (Kreuz and Glucksberg 1989: 383). It should also be mentioned that Pretense Theory (Clark and Gerrig 1984), too, fails to explain (43), since an ‘imaginary speaker’ and an ‘uninitiated audience’ cannot be identified in this example.

Although Kreuz and Gluckberg’s conception might be more powerful than the echoic mention and the pretense views, Utsumi (1996, 2000) claims that the Echoic Reminder Theory suffers from the same difficulties as the Echoic Mention Theory, since the authors’ notion of ‘reminder’ reveals no more features of verbal irony than does Sperber and Wilson’s conception.

Finally, let us present a short review (including some criticism) of a theory that has greatly contributed to the elaboration of irony from quite a different perspective than earlier approaches. This new conception is advocated by Giora (1997) in her Graded Salience Hypothesis and her ‘indirect negation view’ (Giora 1995). In the graded salience conception, salient (or coded) meanings that are listed in the mental lexicon are constantly on our mind (due to factors such as conventionality, frequency, prototypicality and the like). According to Giora, these meanings enjoy prominence in interpreting utterances. This means that regardless even of a strong context predictive of “ironic meaning”, understanding discourse irony involves initially processing the more salient (though contextually incompatible) literal meaning, which is later revised to satisfy the patently ironic contextual bias (Dews and Winner 1999; Giora 1995, 2003b). Further, based on the indirect negation view, the understanding of irony retains the indirectly negated message and so “involves processing both the negated and implicated messages, so that the difference between them may be computed” (Giora 1995: 239).

Giora’s view of irony, however, can be challenged on several grounds. Firstly, Gibbs (1986, 1994b) in his ‘direct access view’ argues that if context is highly predictive of an

oncoming ironic utterance, irony is processed more or less *directly*, without having to go through a contextually incongruous interpretive phase. Secondly, Giora's explication of irony processing (that first the salient literal meaning is activated, which is then weighed against the implicated message "so as to spell out the difference between them" (Giora 1995: 245)) may show an essentially irrational process in which the ironic interpretation is created by aligning the literal and the *ironic* meanings, the latter of which, of course, would not logically exist at this phase of the deciphering process. In other words, Giora seems to consider the "ironic meaning" to be an *input* to irony comprehension, rather than to be the output itself. Thus, Giora's definition seems to be inappropriate at a purely descriptive level.

As can be seen, 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.<sup>77</sup> This raises the question of whether defining irony within the strict confines of a definition is necessary or, indeed, even possible. 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. Any framework of such an analysis could be characterised by conceptual integration (or blending) at some phase. This cognitive operation is based upon 'mental spaces' and could play a part in the comprehension process in a variety of ways. Before entering into details, however, let us first summarise how the literature has defined irony in relation to mental spaces and conceptual integration.

## 6.7 An Overview of Mental Spaces- and Conceptual Integration Approaches to Irony

### 6.7.1 Mental Spaces Approaches to Irony

A detailed description of Mental Spaces Theory (Fauconnier ([1985] 1994)) was already given in Section 2.3.2.. As was described there, mental spaces are on-line, dynamic cognitive structures that are construed as thought and discourse unfold.

The first major attempt to explain irony in a mental space account was proposed by Attardo (2002). His view is based upon the combination of two ideas: (1) verbal irony "is

---

<sup>77</sup> Perhaps the realisation that irony is an extremely elusive concept has contributed to changes in the direction of irony research, especially in the past fifteen years. Instead of trying to provide a definition for this figurative phenomenon, a number of brain (ERP/fMRI) investigations contrast irony interpretation with understanding literal speech (see, for example, Regel et al. 2011).

The articulation of a fully-fledged definition for irony is not the primary concern of the most recent computational studies either. Reyes et al. (2013), for instance, were especially interested in detecting the most salient textual features of verbal irony. Although this investigation is useful in constructing a new model of irony detection, it does not constitute (and probably was not meant to be) an all-inclusive explanation of irony.

essentially an inappropriate utterance which is nonetheless relevant to the context” (Attardo 2000a: 823); and (2) the Presupposition Float Principle (Fauconnier, 1985 [1994]), which can be illustrated by the following example from Sweetser and Fauconnier (1996):

(44) Bill says that Laura is single but that John wants to meet Laura’s husband.

According to Sweetser and Fauconnier (1996), the representation of (44) minimally incorporates the construction of three mental spaces: speaker reality, a speech space cued by the space-builder ‘Bill says’ and a want space cued by the space-builder ‘John wants’. On interpreting (44), the presupposition (that ‘Laura is married’) holds only in the want space. The contrary information (that ‘Laura is single’), however, blocks float of this presupposition into the higher speech space.<sup>78</sup>

Based on these two predictions, Attardo (2002: 171), in his explication of irony, argues that

... since ... an ironical utterance is pragmatically inappropriate to its context, and inappropriateness is defined as having one or more presuppositions which are incompatible with the presuppositions held in the context of the utterance by its participants, it follows that the ironical presuppositions are blocked from floating up into M (the base mental space shared by the speaker and the hearer) because they are opposite to some of those in M (the addition in parentheses is mine).

That is, when a hearer is exposed to an ironic utterance, he creates a mental space whose presupposition(s) fail to float upwards into his reality space. According to Attardo, this makes the hearer conclude that an ironical mental space is created.

Attardo’s view, however, falls foul of the following criticism: since “mental space theory was originally motivated with the goal of keeping incompatible information about a single object in *discrete* representations” (Coulson 2005a: 135; the emphasis in italics is mine), it is not clear how, in Attardo’s theory, the utterance and the reality spaces are weighed to recognise incongruity. Rather, as is claimed in this dissertation, for any incompatibility to be discovered, the hearer might need to conceptualise the reality and the utterance spaces *at once*.

---

<sup>78</sup> Note, however, that the information ‘Laura is single’ prevents the presupposition ‘Laura is married’ from floating into the higher speech space only in Bill’s space but not necessarily in the speaker’s space. Supposing that the comprehender does not agree with Bill (that Laura is single), the presupposition that ‘Laura is married’ may not be blocked in Bill’s space; it will ‘jump’ into the reality space (where it meets itself).

That is, a conceptual blend, which is made up of these two spaces, should be created (this will be discussed later).<sup>79</sup>

Note, however, that Attardo and Raskin (1991) advocated an incongruity-resolution model of humour called the General Theory of Verbal Humor (GTVH), which is actually a revision of Raskin's (1985) Semantic Script Theory of Humor (SSTH). In a later reconsideration of the GTVH, Attardo (1997) argued for the so-called SIR (setup-incongruity-resolution<sup>80</sup>) model, which also makes predictions about the cognitive representation of jokes. Consider the following example, which was originally proposed in Raskin (1985):

(45) "*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*".

According to the SSTH/GTVH, the first part of this joke evokes a standard doctor 'script'<sup>81</sup> in which someone enquires about the presence of a doctor at the doctor's residence with the purpose of being treated for some disease. The doctor's spouse (who happens to be young and pretty) answers (in a whispering voice) that the doctor is not at home, and invites the patient to enter the house. This invitation, however, does not fit with the doctor script, so the listener must backtrack and re-evaluate the text. The information that the doctor's wife is young and pretty and that she is inviting the patient into the house when her husband is away activates a different – a lover – script.

In his SIR model, Attardo (1997: 412) argues that in the incongruity phase of the processing of jokes, "two interpretations must coexist in the mind of the interpreter". Accordingly, the understanding of the joke above presupposes the co-presence of the doctor and the lover scripts for the time in which the dissimilarity between them is evaluated. Resolving this incongruity will then give rise to the humorous effect.

Since irony is sometimes seen as a form of humour (Attardo 2002; Attardo et al. 2003; Brumark 2006; Creusere 2000; Dews et al. 1995; Dews and Winner 1997; Gibbs and Izett 2005; Gibbs et al. 1995; Giora 1995; Harris and Pexman 2003; Kotthoff 2002; Kreuz and Glucksberg 1989; Kreuz et al. 1991; Littman and Mey 1991; Long and Graesser 1988; Matthews et al. 2006; Mizzau 1984; Partington 2007; Pexman et al. 2005; Roberts and Kreuz 1994; Schütte 1991),

<sup>79</sup> See also Turner (1996), who argues that reasoning about everyday problems is also seen as a process which involves *blending*, rather than the conceptualisation of distinct mental spaces. Such an "absent-minded" mistake would be, for example, when someone puts on his glasses to *hear* better.

<sup>80</sup> An explanation of the setup phase of the SIR model is not necessary for the present analysis. Therefore, the dissertation does not include it in the discussion of the given example.

<sup>81</sup> In Attardo's explanation, scripts are "collections of semantic information pertaining to a given subject" (Attardo 1997: 403).



one might argue that Attardo's theory of irony should be interpreted in terms of his GTVH/SIR model. In this case, the criticism (presented at the beginning of this section) that Attardo's explanation of irony is "incomplete" in a blending framework should be treated with caution since, as seen above, in the GTVH/SIR framework two opposing scripts are *co-present*.

However, there is a major objection to the claim that Attardo's view of irony should be explained in the GTVH/SIR framework: Attardo himself argues that "the GTVH and the relevant inappropriateness treatment of irony are independent projects" (personal communication, 2013). That is, although a number of researchers see some connection between humour and irony, the GTVH/SIR model does not deal specifically with ironic examples.

Finally, from the discussion above a contradiction can be seen in the way Attardo is expected/supposed to treat 'humorous irony' in a conceptual integration framework. As the criticism of the presupposition float idea suggests, Attardo's explanation of irony cannot be treated in a blending model. On the other hand, his treatment of humour *does* predict conceptual integration processes (as proposed in GTVH/SIR). If these two claims are simultaneously accepted, then Attardo's discussion of 'humorous irony' might occasionally raise the vexing question of whether or not that type of irony should be treated in a blending framework. He, however, has not presented a particular blending explanation for 'humorous irony'.<sup>82</sup>

Continuing the discussion of the most articulated mental space theories of irony, consider Kihara's (2005) 'expectation space model', in which he claims that "an ironical utterance refers to the mental space of a mutually manifest expectation" (Kihara 2005: 513). For example, imagine a situation in which two people approach a door one after the other, proceeding in the same direction, and the one who opens it (A) lets the door slam in the other's (B's) face (who, say, happens to be carrying a pile of books). As a reaction to A's impolite behaviour, B says to A:

(46) Thanks for holding the door.

According to Kihara (2005), B's remark in (46) evokes a counterfactual mental space of expectation in which B is expressing gratitude for A's kindly holding the door.

Kihara's view could be considered a forerunner of more complete conceptions of ironic discourse analysis in that it draws on both the pragmatic and the semantic aspects of communication theory. The pragmatics of his view is provided by the notion of 'speaker's expectation' and the semantic foundation is drawn from Fauconnier's ([1985] 1994) Mental

---

<sup>82</sup> For a discussion of possible differences between irony and joke, see Chapter 10.

Spaces Theory. However, Kihara's conception also suffers from a certain amount of ambiguity, since a reaction to the above door-slamming situation such as that in (46) below poses a difficult task for Kihara's expectation-driven conception:

(47) Thanks for shutting the door.

Although Kihara agrees that (47) is ironic too, his idea that an ironical utterance (U) implies something similar to the formulaic sentence "I (or we) had expected a situation where I could say U (without irony)" (Kihara 2005: 524) clearly fails here, since it is definitely nonsense to expect a situation in which a speaker who is carrying a pile of books is grateful for having a door slammed in his face. Further, Kreuz and Link (2002) argue that allusions to expectations do not play a significant role in the interpretation of verbal irony. In a similar fashion, Partington (2007: 1548) claims that "defeated expectation is not sufficient in itself to explain irony".

As compared to the models of the '80s and '90s, the Mental Spaces Theory (Fauconnier, [1985] 1994) has paved the way for a radically novel means of thinking about ironic processes. Generally speaking, however, any mental space account of irony is questioned minimally by the fact that mental spaces tend to keep incompatible information separately, in distinct representations. Thus, as was suggested earlier, for a comparative evaluation of such conflicting information, some *integration* is needed at the conceptual level of organisation.

### 6.7.2 Blending Theory Approaches to Irony

As an extension of the Mental Spaces Theory, Fauconnier and Turner (1994, 1998, 2002) proposed the Blending Theory to explain linguistic phenomena that mental spaces cannot adequately account for.<sup>83</sup> Blending Theory argues that speech representation involves the integration of mental space structures and this blending operation is a basic cognitive process which is central to the way we think.

The first major paper on explaining verbal irony within a conceptual blending framework was authored by Brandt (2003). In a semiotic version of Fauconnier and Turner's (1994, 1998, 2002) Conceptual Blending Theory, Brandt analyses an ironic turn in which three bachelors are competing for a vacation date with a blonde, blue-eyed California beauty. It is the parents who will choose the ideal vacation partner for their daughter. During the show, one of

---

<sup>83</sup> Although the literature attributes 'blending' to Fauconnier and Turner (1994, 1998, 2002), discussion of this concept dates back earlier in time. Actually, the notion of 'conceptual integration' had been introduced into semantics by Zsilka (1978), well before Fauconnier and Turner's seminal contributions.

the contestants (called Giancarlo) is blamed to have made scornful remarks about women. When he is asked to explain, he confirms. As a reaction, the blonde's mother says "*Keep digging*".

In search of *how* the above utterance comes to have an ironic implication, Brandt (2003) proposes a semiotic mental space network, which I reproduce in Figure 6 for purposes of explication.

In this model, the Semiotic space (or the base) is the space where the 'sign' is produced; it is the conceptual structure from where further space building takes place and it serves as the 'Ground', which contains the whole context of the communicative act. The Presentation space hosts a "fictive", insincere (or pretended) enunciation, which is a false echo of what the speaker might have said if he was being sincere. In the Reference space we have the enunciator's sincere attitude towards some significant aspect of the situation. The connection between these last two

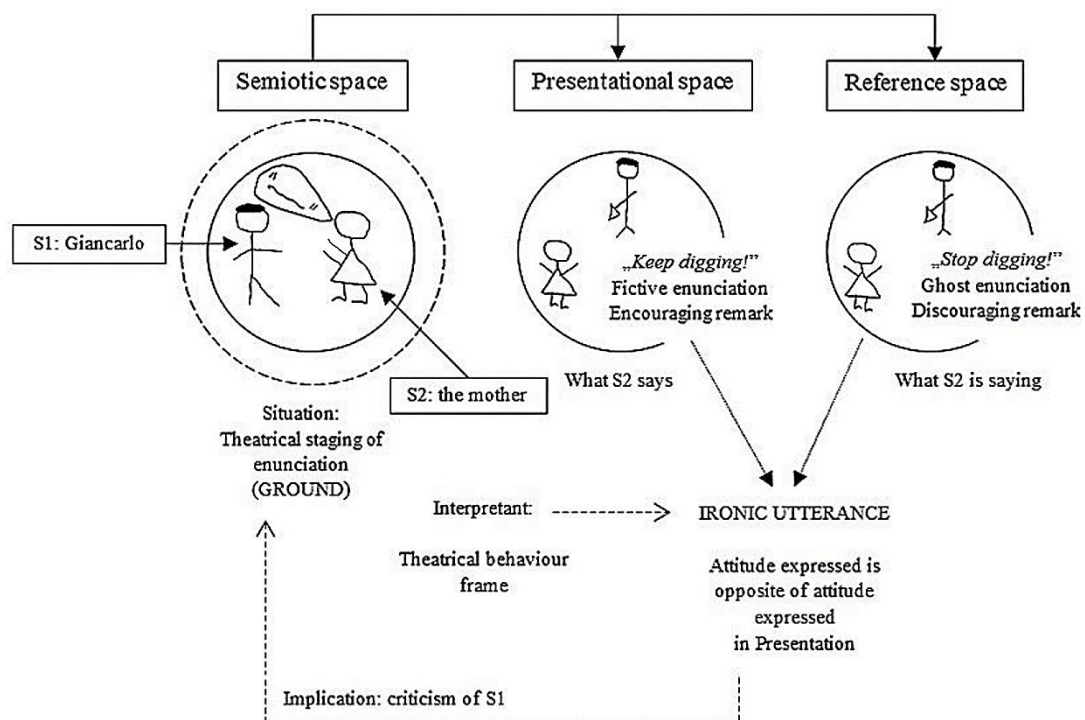


Figure 6. Brandt's conceptual blending model of verbal irony<sup>84</sup>

spaces relies on the relevant sign relation (the interpretant). The relevance is decided by an informed guess as to the sign producer's intention, i.e., the causal relation between an intentional agent and a sign production. Irony interpretation involves the blending of the Presentation and the Reference spaces.

<sup>84</sup> For clarity's sake, however, two boxes at the Semiotic space have been added, which identify the interlocutors as Giancarlo (S1) and the mother (S2).

Applying this framework to the Giancarlo example, the utterance presenting the ironic speech act is the presentational aspect of the sign. The communicative intent of the mother (indicated as S2 in Figure 1) is the reference and the relevant sign relation is ‘indexical’. That is, the mother’s utterance is the “fictive enunciation” of an encouraging imperative clause, “*Keep digging*”. This sign, however, is meant to refer to a warning to Giancarlo (S1): “*Fool, you’d better stop digging!*”. The interpretant is the interlocutors’ understanding of the rules and norms of ironic communication grounded in a situation where the mother is staging her communicative intent in an insincere, theatrical fashion. The ironic utterance serves as a frame of reference for an indexical interpretation since it signifies the sincere intent (the reference) of the enunciation. What the mother says implicates the presence of a “ghost utterance” which contradicts it.

The sign is understood in relation to the Ground: an intersubjective reality, perceptually or conceptually salient to the communicating parties. In our example, the Ground means Giancarlo’s familiarity with the speaker and the situational context, including the encompassing ‘script’ of the dating game.

Under an interpretation of Brandt’s account, the way irony is processed (that is the ‘how’) can easily be seen in a semiotic blending framework where two spaces are merged: the Presentation space and the Reference space. The former is a fictive construction which contains an imagined speech act (that the mother is actually encouraging Giancarlo to keep digging), in the latter we have a real situation – ‘real’ according to the enunciator in the Semiotic space – including the state of affairs in the presentation which, as being fictive, is unreal. In the blend the referential situation includes an imagined speech act.

Brandt’s theory, however, could be seen as rather vague, since such an analysis cannot adequately specify the interpretive process for generating emergent inferences for at least the following reasons: first, it is not the blending of the Presentation and the Reference spaces that will provide the ironic implicature, since the latter space already (or inherently) delivers the implied message. However, Brandt’s idea that the Reference space might contain elements of both the Semiotic space and the Presentation space (and that these two spaces thus constitute a blend) seems more plausible and legitimate for analysis of ironic processes. Second, if, as Brandt argues, the Reference space contains the “affairs in the presentation”, no rational argument could be seen for blending part of this space (i.e. the state of affairs in the presentation) with *itself* in the Presentation space for purposes of generating ironic inferences. Third, the Reference space seems to contain what we find in Brandt’s definition of an ironic blend, so, perhaps contrary to the author’s original intention, these two spaces are actually

described as being identical. However, a *separate* blended space in Brandt's model might be assumed, since, as mentioned earlier in this dissertation, Brandt postulates an integration of the Presentation and the Reference spaces. Fourth, it is unclear why the Reference space inherently incorporates the implied message. Finally, Brandt does not explain how (under what principles) the Reference space actually comes into existence during the comprehension process.

Another model to explain verbal irony in a conceptual blending framework was developed by Coulson (2005a). According to her conception, whenever a listener is confronted with an ironic Blend, he unpacks it into two input spaces: an Expected Reaction Space and a Counterfactual Trigger Space. In the former, the hearer models the actual course of events. Since irony is mostly associated with some negative evaluation, the expected reaction is to get upset. The latter space hosts a counterfactual trigger for the speaker's utterance and "it typically applies to the way we wish the world had been" (Coulson 2005a: 136).

To illustrate her model, Coulson analyses a scenario in which a driver says "*I love people who signal*", after being cut off in traffic. Consider Figure 7 below:

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

Figure 7. Coulson's analysis of "*I love people who signal*" as an ironic Blend

This model, however, is ambiguous. Two possible (though equally insufficient) interpretations could be seen: under the first one, as Coulson argues, during ironic representation an already constructed Blend is "unpacked" into two input spaces. Such conception can be challenged on the following grounds: it seems to explain *what* the Blend is made of rather than *how* it is constructed. However, a theory explicating the processing sequence of irony must also consider the 'hows' and b) it does not explain how the listener knows that unpacking needs to be done. That is, besides the 'hows', the 'whys' should also be explained.

Further, what Coulson makes us see in the Expected Reaction Space might constitute the after-Blend state of affairs. If considered as such, this space might be more persuasively seen as being the *output* of (rather than the input to) blending. In other words, the critical evaluation on the part of the enunciator should be the matter of blending, and should not be incorporated in one of the inputs alone. If the Expected Reaction Space is the *output* of blending, Coulson's model is left with only one input (i.e. the Counterfactual Trigger Space). Conceptual Blending, however, presupposes the merging of, at least, two mental constructions. Thus, for lack of a blend, there is nothing to 'unpack' in this case.

According to another interpretation of Coulson's model, instead of *unpacking* the Blend, irony comprehension is seen as quite the opposite: a *merge* of the Expected Reaction Space and the Counterfactual Trigger Space. If we assume that irony comprehension involves the blending of 'reality' (however this concept is defined) with the mental space structure evoked by the ironic(ally intended) utterance, in this model it is only the Expected Reaction Space that could constitute reality. In this space, however, 'chastisement' cannot serve as part of the "actual course of events", since resentment should not already (or explicitly) be 'there'; rather, it is inherently encoded in the *logic* of the situation. That is, the fact that the errant driver's (mis)behaviour may have infuriated the (ironic) speaker does not *automatically* mean the creation of a 'chastising' space on the part of the hearer. Rather, the critical evaluation (in the hearer) will be created as a result of blending operations after the speaker's (ironically intended) remark. So, it is not clear why the Expected Reaction Space should model the course of events, and the source of the negative evaluation in this space also appears to be unspecified by the author. That is, under a different and more legitimate view, instead of presupposing some already existing resentment in the Expected Reaction Space on the part of the hearer, in order for any grudge to be explicitly manifested, 'non-chastising' reality should be merged with what the speaker's utterance evokes (i.e., roughly with what Coulson claims to constitute the Counterfactual Trigger Space).

Further points that Coulson should consider in the explication of her model: she does not explain what chastises and compliments have to do in Figure 7. Also, it is not clear why people who abide by the Highway Code should be complimented.<sup>85</sup> Finally, Coulson is right when she labels the driver in the Blend *A'* since that motorist is different from whom we can find in the Expected Reaction Space. However, *B'* in the Blend cannot be of the same status as *A'*. *B* should remain constant in the Blend. In other words, in the Blend *A'* is a different person who signals to the same *B* whom we can find in the Expected Reaction Space.

As can be seen, explaining verbal irony in a conceptual integration network could easily result in definitional obscurities (as in the case of the two models described above). However, both Brandt's (2003) and Coulson's (2005a) conceptions have contributed to a novel way of thinking about irony. The legitimacy of their endeavours has been confirmed by the fact that a significant number of researchers from different fields relate irony and conceptual integration for their own purposes (see, for example, Fauconnier and Turner 1994; Katz et al. 1998; Kimmel 2005; Lucariello 1994; Pilkington 1997; Shamay-Tsoory et al. 2005; Turner 1996, 2001; Turner and Fauconnier 1995).

---

<sup>85</sup> An alternative, blending analysis of the deviant driver example will be presented in Section 8.2.

## 6.8 Summary of the Chapter

In all, this chapter has demonstrated that researchers have not yet presented a complete, all-embracing definition of irony. This motivates the idea that the most effective way to understand irony is *not* through scholarly definitions as much as through an investigation of how it really works.

In an attempt at evaluating the most significant scholarly definitions of irony, the chapter explained why the Standard Pragmatic Model (Grice 1975, 1978) may run into difficulties in its treatment of irony. In a more detailed discussion than what the literature offers, specific examples of everyday speech are analysed to show that the opposite of what an ironic speaker says can sometimes be interpreted on different grounds. This supports the idea that the basic tenet of the Standard Pragmatic Model (that an ironic speaker means the opposite of what he says) should be treated with caution. In the analysis of the examples, the distinction between alternative negations is made mostly in terms of predicates and propositions in the utterances. This contrasts with Haverkate's (1990) explanation of irony, which allows predicate- (and *not* propositional) negation. A critical discussion of Haverkate's model is also the concern of the chapter.

The most influential theories of irony of the 1980s and 1990s are also considered. Besides outlining those models and discussing them in light of the criticism that can be found in the literature, this chapter incorporates an original critical evaluation of Giora's (1997) Graded Salience Hypothesis and her 'indirect negation view' (Giora 1995).

The chapter also outlines the most significant mental space- and blending theories of irony. Those models have contributed to the academic discussion of this phenomenon by opening new perspectives: irony might be explained as a 'mode of thought' in which conceptual integration plays an integral part. Since the blend-based frameworks which were explained in this chapter ran into difficulties of different kinds, the dissertation proposes an alternative blending model in Chapter 7. This will be followed by the structural alignment of metaphor and irony in Chapter 8.

## **CHAPTER 7**

### **AN ALTERNATIVE BLENDING ANALYSIS OF IRONY**

#### **7.1 Introduction**

Since earlier attempts at defining irony do not explain all manifestations of this mode of thought, the dissertation does not intend to construct an all-embracing scholarly definition. In spite of this, however, this chapter considers Wittgenstein's (1953) theory of 'family resemblances' and sees examples of irony as members of a group which are related by particular similarity markers. Furthermore, the chapter provides a working definition which essentially corresponds to the blend-based processing model of irony – the new framework of representation which the dissertation proposes.

In order to see how the blend-based working definition (of irony) functions in terms of concrete manifestations of this mode of thought, an experiment was conducted, which will be detailed in Section 7.3 Later in the chapter the blending model of irony is tested using some items which most participants in the experiment found ironic.

#### **7.2 A Working Definition of Irony**

As the discussion in the previous chapter shows, 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. As Wittgenstein explains,

These phenomena have no one thing in common which makes us use the same word for all. ... You will not see something which is common to all, but similarities, relationships, and a series of them at that. ... We see a complicated network of overlapping and criss-crossing: sometimes overall similarities, sometimes similarities of detail. I can think of no better expression to characterize these similarities than 'family resemblances' for the various resemblances between members of a family (1953: 31–32).



Treating games in the theory of family resemblances may prevent one from applying rigid (definitional) formalisations and distorting generalisations when trying to grasp the nature of ‘game’. If, however, 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.

If this line of thought is applied to irony, one could easily argue that there is no sense in defining this mode of thought in scholarly terms since there may not be even one single attribute which is present in *all* ironic phenomena. This idea is compatible with Booth’s, who, in his thoughts about irony, states the following:

My first suggestion, then, turning now to my true subject, is that we face not a single creature, waiting to be defined or tamed, killed or revived, but rather many different creatures that share at best only a family resemblance (1983: 723).

The dissertation adopts this view. As the discussion from Chapter 6 on indicates, although the different theories of irony explain some aspects of this phenomenon, irony has not been characterised 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’.

The term ‘folk theory’ is also used in the literature in a specific sense. Now, let us elaborate on this usage and then compare it to the application of this term in the present discussion of irony. Lakoff and Kövecses (1987) argue that the conventional expressions used to talk about ‘anger’ (to make one’s blood boil, to do a slow burn, to blow up, etc.), for instance, share a coherent conceptual organisation. Under this view, our understanding of this emotion is, of course, based on a *folk* model (or folk theory), since there is no boiling, burning or explosion involved from a physiological perspective. That is, although anger may be accompanied by increase in blood pressure and/or heart rate, these expressions cannot be accounted for by physiological or scientific evidence (since no actual boiling or burning is involved); rather, they are based upon human experience.<sup>86</sup> Although the model is extremely powerful and consistent within a given culture, it is not universal. In Zulu (a Bantu language in Southern Africa), for example, they have different folk models for ANGER. As an example,

---

<sup>86</sup> Strongly advocating the Lakoffian conception that humans tend to connect related phenomena into coherent cultural models, Kempton (1987) has also discussed folk (or naïve) theories and made a distinction between these and institutionalised models, which are acquired from scientific literature or controlled experiments.

they conceptualise this emotion in terms of HUNGER (ANGER IS HUNGER), which is different from the cultural models reflecting how speakers of English perceive ANGER (c.f. Kövecses 2000; Taylor and Mbense 1998). Both the lack of physiological or scientific validity and the culture-specific nature of conceptualisation indicate that our experience of ‘anger’, that is, the folk theory associated with this emotion, is *not* a matter of reality.

In contrast to the Lakoffian conception, which regards folk phenomena such as ‘anger’ as models of coherent segments of experience, the dissertation proposes that no such coherent model exists in terms of ‘irony’. This means that the term ‘folk theory’ cannot be applied to this figurative phenomenon in the same sense as it was used for discussing emotions by Lakoff and his followers.

Neural development and social learning contribute to the development of a highly subjective concept of irony in a parallel fashion (Pexman and Glenwright 2007). Owing to diversity in individuals and in their social experience, the notions of irony that people develop also show a certain amount of variation. However, since the social context in which communication occurs has the effect of standardising concepts across individuals (see Freyd 1983; Gibbs 2000), particular examples of figurative speech might be considered ‘irony’ more generally, by ordinary members of society. Thus, when in this dissertation irony is referred to as being a matter of folk theory, it is actually meant that particular figurative statements are tagged ‘irony’ across a range of individuals with common socio-cultural experience.

In closing the discussion on the dissimilarity between the Lakoffian and this dissertation’s understanding of folk theory, two important distinctions should be made: first, as opposed to the non-real nature of the Lakoffian folk models,<sup>87</sup> the view of irony as folk theory in this dissertation reflects our knowledge of the world as we see it. Second, unlike conventional expressions like ‘anger’, ‘irony’ does not constitute a folk model in itself but only with respect to its specific applications. In other words, the assertion that ‘irony is a matter of folk psychology’ needs to be understood in terms of particular occurrences of ironic examples, rather than in relation to a systematic cultural, conceptual or psychological model. This could even be so in spite of the standardising effects of the social context. That is, although socio-cultural experience might have a say in the construction of individual concepts of irony, just as physiology in anger, the standardising forces of the social context are not powerful enough to yield *universal* human knowledge in terms of this figurative phenomenon. Therefore, this dissertation is inclined to claim that there is no such culturally and psychologically coherent

---

<sup>87</sup> As mentioned, ‘non-real’ in the sense that no actual burning is involved in expressions like ‘to do a slow burn’ (meaning ‘to be angry in a “quiet” manner’).

concept as IRONY but only individual (yet, to some extent, overlapping) notions, such as IRONY<sup>1</sup>, IRONY<sup>2</sup>, and so on. This is one reason why irony is so difficult to characterise in a single definition.

In view of the above discussion, thus, irony should not be treated as a coherent concept. Rather, this phenomenon is a matter of folk psychology. This, however, does not preclude the possibility of finding commonalities across examples of irony. If this phenomenon is regarded as a matter of ‘thought’ (rather than as a figure of speech), for instance, the relation among examples of irony should be found at the conceptual level of organisation.

Conceptual integration, which is the central element in Fauconnier and Turner’s (1994, 1998, 2002) Blending Theory, is one such common attribute which should be considered in a working definition of irony. For its purposes, the dissertation characterises this mode of thought in the following way: irony is a phenomenon 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.

In what follows, some instances of irony will be analysed with the primary aim of identifying the cognitive operations by which examples of irony could potentially be related. In order to find items for analysis, those that ordinary language users find ironic, an experiment was conducted.

### **7.3 Experiment 3**

#### **7.3.1 Introduction**

The literature has presented quite a few analyses of ironic examples in which the examined items are not pre-tested in terms of their ironic character (see, for example, Attardo 2000a). Such studies take it for granted, without any experimental proof, that certain linguistic examples are ironic.

However, to see to what extent the working definition of irony which is proposed in this dissertation works, linguistic items were collected which ordinary language users considered ironic. The following sections give a detailed description of that experiment. In the second part of this chapter the alternative blending description of irony will be tested on some examples which were rated as being ironic by most subjects in the experiment.

### **7.3.2 Method**

#### **7.3.2.1 Participants**

Twenty-two native Hungarian-speaking undergraduate students (regular and correspondent) from the University of Nyíregyháza volunteered to participate in the study. Seventeen subjects were women (mean age = 28.1) and 5 were men (mean age = 26.2).

#### **7.3.2.2 Materials and Expectations**

The experiment involved a questionnaire (see Appendix F, and its English equivalent Appendix G). Fifteen brief vignettes were written describing an interaction between two people. Each of these began with a description of the contextual setting (1-4 lines in length), then a conversational exchange followed. Five of the vignettes were based on examples which the semantic literature considers ironic. Besides the vignettes the experiment incorporated an example which the literature tags ‘situational irony’, and one where there is no converse between two interlocutors but a self-directed ironic remark. Both of these as well are taken from earlier academic discussions of irony. These seven items constitute the ‘irony group’ (of experimental examples). Most importantly, all experimental items met the criteria of the working definition of irony. The questionnaire also incorporated nine metaphors (‘metaphor group’), which served as distractor factors. They were used in Experiments 1 and 2. Similar to the elements in the irony group, the metaphors were frequent subjects of semantic and psycholinguistic investigations. The order of the experimental items was randomised.

It was expected that the items that met the criteria of the working definition of irony would be seen as examples of irony by the experimental subjects.

#### **7.3.2.3 Procedure**

The participants were asked to read the instructions to themselves as the experimenter read them aloud. The instructions asked them to read the items, and decide whether the highlighted parts in them were ironic or not. Subjects were instructed to indicate their answers on a separate answer sheet (see Appendix H and its English translation Appendix I). The questionnaire also incorporated two samples to familiarize the participants with the task. The testing session lasted approximately 20 minutes.

#### 7.3.2.4 Results

In line with expectations, the subjects had no difficulty in recognising the ironic examples. Twenty-two participants were asked to fill in the questionnaire. However, there was one who rated the key elements in Items 1-7 correctly, and then considered all the examples that follow to be ironic. He may have lost interest, motivation or a sense of purpose in persevering to (responsible) completion of the questionnaire. Therefore, his answers were not included in the analysis.

Table 5 below summarises the questionnaire on irony.<sup>88</sup> In its main part it presents the key elements of the examples. On the basis of what they are considered to be in the literature, each key element is tagged with either an ‘i’ (irony) or an ‘m’ (metaphor) in a column on the left. On the right-hand side, participants’ decisions can be seen as to the ironic character of the key elements.

---

<sup>88</sup> See the complete versions (English and Hungarian) in Appendices A and B.

Table 5. Participants' judgements of the key elements (of the examples). The key elements which (almost) all subjects found ironic are green, those which (only) some saw ironic are yellow, and the ones that (nearly) nobody found ironic are red.

		Items (only the key elements)	Irony	Not irony
	i/m		out of 21 answers	
1.	i	Szeretem azokat az autósokat, akik indexelnek sávváltáskor! I love people who signal when changing lanes!	19	2
2.	m	A bizottság sötétben hagy tapogatózni mindaddig, amíg az összes jelöltet meg nem hallgatják. The board keeps me in the dark until all the candidates have been interviewed.	1	20
3.	i	Kösz! Thanks!	21	0
4.	i	Szép kis barát vagy, mondhatom! You are a nice friend, I can say!	20	1
5.	m	A kapcsolatunk zsákutcába jutott. Our relationship has hit a dead-end street.	1	20
6.	i	(a meggyógyított gyilkost kivégezték) (killer cured, then executed)	18	3
7.	m	Ő egy igazi cápa! He is a real shark.	4	17
8.	i	Remekül táncolsz, drágám! You really are a good dancer, darling!	21	0
9.	m	Majd' szétrobbanok! I'm blowin' up!	0	21
10.	m	Az érvelésem minden gyenge pontját hevesen támadták, ... They attacked every weak point in my argument quite fiercely ...	2	19
11.	m	Gábor révbe ért. Gábor has found a berth.	0	21
12.	i	Milyen szép időnk van ma! What beautiful weather we have today.	21	0
13.	m	Kovács tanárnő fertőzött meg a fizikával. It was my teacher Mrs Kovács who infected me with Physics.	5	16
14.	m	Egy igazi börtön. It's a real prison.	8	13
15.	i	Remek! Oh, great!	20	1
16.	m	Teljesen lefagytam. I totally froze up.	1	20

On the basis of subjects' answers to the irony questionnaire, the key elements can be classified into 3 main groups: a) elements that (nearly) all subjects rated to be ironic, b) examples that (only) some participants considered ironic, and c) items that (almost) no subject identified as manifestations of irony.

The results show that most subjects found examples 1, 3, 4, 6, 8, 12 and 15 ironic – exactly the same items that the literature generally analyses as irony. This suggests that although the participants may not define irony in exactly the same way, they have a similar conception of it. Three examples (items 3, 8 and 12) were seen as ironic by *all* subjects in the experiment. Situations 4 and 15 were considered to be manifestations of irony by all but one participant.

Examples 1 and 6 received the most ‘not ironic’ labels (in the irony group) – 2 and 3, respectively. In spite of this, however, they were rated as being items of irony by the overwhelming majority of the subjects.

There were examples which (only) some participants considered manifestations of irony. Examples 7, 13 and 14 received 4, 5 and 8 ‘irony’ classifications, respectively. In Item 14 one of the interlocutors is talking about his new job. He calls it a “prison”. Although this example is generally considered a metaphor in the literature (see Glucksberg and Keysar 1993), some subjects in the experiment may have rated it as being ironic, since the enunciator is expressing his disappointment and anger about his new job – feelings that are very often associated with irony (Kumon-Nakamura et al. 1995; Shelley 2001). Item 13 was also seen as ironic by some participants. However, the speaker in this example is probably not disappointed or angry. In this case the ‘irony’ choices may have been the result of the negative connotation of ‘infection’ – exactly because irony is quite frequently associated with some *negative* evaluation (see Chapters 5 and 6). A similar line of thought might be applied to example 7. In it a lawyer is metaphorically seen as someone who does his job aggressively, showing no mercy to his ‘enemies’. The idea of ‘aggressiveness’ and unmerciful attitude may have evoked some negative connotation in the participants. Perhaps this gave them a hint that example 7 was a manifestation of irony.

Finally, there were items which (almost) no subject considered ironic. These are examples 2, 5, 9, 10, 11 and 16.

### **7.3.2.5 Discussion**

Experiment 3 was designed to collect examples that ordinary language users find ironic. This search was carried out in order to find linguistic items to test the blending model of irony which was proposed in the dissertation.

The experiment shows that there are examples which (almost) no subject found ironic, there are 3 which (only) some participants considered phenomena of irony, and there are items that (nearly) all subjects rated to be ironic.

In the following section the working definition (that is, the proposed blending model) of irony will be tested on some elements which (nearly) all subjects rated to be ironic in

Experiment 3. The analyses focus on the mental space structures and conceptual blending in the examples.<sup>89</sup>

## 7.4 Blending as a Major Attribute in the Representation of Irony

### 7.4.1 A Blending Analysis of the Ironic “*What Absolutely Beautiful Weather*”

In “*What absolutely beautiful weather*”, which is treated as an ironic remark (for example, in Colston 2000; Gibbs and O’Brien 1991; Kaufer 1981; Kreuz 1996, 2000; Kreuz and Link 2002; Kumon-Nakamura et al. 1995), a speaker expects something desirable but experiences quite the contrary. The speaker then couches his disapproval in a way that contradicts the actual state of affairs. In other words, there is a contradiction between his utterance and reality. The hearer identifies this conflict at a cognitive level and through various mental processes he deciphers the implicature that the speaker’s remark was actually meant to criticise (or to express irritation) rather than to praise. After reviewing the most significant interpretations of how the ironic “*What absolutely beautiful weather*” works, the present chapter explains this utterance as a conceptual blend.

First, as was already suggested in Section 5.7, in explaining their Pretense Theory of irony, Clark and Gerrig (1984) argue that the understanding of the weather example presupposes an enunciator who is pretending to be an unseeing person. He could be a weather forecaster who is explaining to an unknowing audience that the weather is beautiful. The speaker expects the hearer(s) to see through the pretence and to realise that he is actually ridiculing the person who would be making such a statement, the person who would accept it and the exclamation itself.

Second, in the weather example the processor adopts an analysis for emergent implications on a probabilistic basis. According to constraint-satisfaction models of irony (Gibbs 2005b; Ivanko and Pexman 2003; Katz 2005; Katz et al. 2004; Martin 2006; Pexman 2008; Pexman et al. 2000), an utterance activates multiple cues (or constraints) which are then considered in parallel in order to provide probabilistic support for different possible interpretations of that utterance. If the constraints point to the same direction, competition among various alternatives is resolved quite rapidly: an “ironic meaning” is adopted while other (“literal”, metaphoric, and so on) interpretive possibilities will be rejected. To provide only a

---

<sup>89</sup> Note that the examination of the ironic phenomena in the dissertation profiles the Input Spaces and the Blend, and pays less attention to the Generic Space. This and the extent to which the examples (of irony) are detailed in the analyses conform to the traditions (methodology) of Blending Theory (Fauconnier and Turner 1994, 1998, 2002).



few examples of ironic constraints, in “*What absolutely beautiful weather*” one such marker (or as Kreuz (1996) calls it ‘heuristic’) is simply the fact that the speaker deviates from (the hearer’s) reality. Another cue for an ironic interpretation is the degree of this deviation. As Kreuz (1996: 26) argues, “The more extreme the statement, the greater the certainty of ironic intent”. Kreuz also suggests that, although this is not necessarily always the case, ironic statements are especially extreme. The hyperbolic effect in the weather example, for instance, is well achieved (and also increased) by the use of the adverb ‘absolutely’. Further, a slow nod, wetting one’s lips and facial expressions such as winking or rolling one’s eyes, as well as an ironic tone of voice can also bias towards a figurative interpretation (see, for example, Attardo 2000b; Cheang and Pell 2008; Clark and Gerrig 1984; Cutler 1974; Haiman 1998; Kreuz 1996; Kreuz and Roberts 1995; Muecke 1978; Rockwell 2000 for an acknowledgement of the legitimacy of ironic prosody).

In what follows, a mental space description of the weather example will be provided with the primary aim of illuminating the role conceptual blending plays in its representation. Consider Figure 8 below:

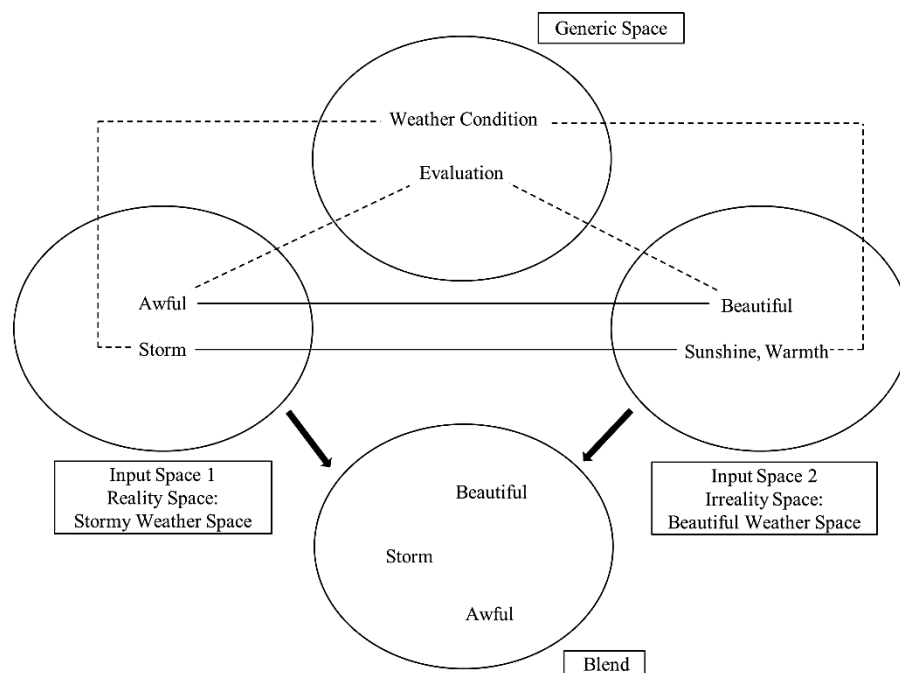


Figure 8. A schematic diagram of the mental space structure of the ironic “*What absolutely beautiful weather*”

Imagine a situation in which husband and wife are planning a short trip for the weekend. However, contrary to their expectations, it is stormy on the morning of their planned departure. The wife then goes to the window and says to her spouse: “*What absolutely beautiful weather*”.

As Figure 8 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<sup>90</sup> 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.

Different elements in the inputs might be related as opposites. Some of these connections are indicated by the horizontal lines between those spaces in Figure 8 above. Thus, in the inputs, storm is linked to sunshine and warmth, and awful to 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 implication.<sup>91</sup>

---

<sup>90</sup> Trying to provide a definition for 'reality' is beyond the scope of the dissertation. However, the Stormy Weather Space minimally incorporates what might be called the 'present' or the hearer's 'here and now'. Pöppel (1994) has distinguished two kinds of 'perceptual moments': (a) "PRIMORDIAL EVENTS", which last for a fraction of a second, serve to integrate spatially-distributed sensory (visual, auditory, and so on) information in the brain and (b) the perceptual moment with an outer range of 2–3 seconds, which link these primordial events into a coherent unity. Pöppel (whose 2–3-second-conception is echoed in Brisard (1999) and in Davies (1995)) argues that it is this latter perceptual moment in relation to which the concept of the 'present' (our experience of 'now') can be traced. Although, as just suggested, the perception of 'now' may be momentary or may only take a few seconds, speech events tend not to be momentary; they may extend both before and after the current moment of consciousness (see Cutrer, 1994; Evans & Green, 2006). Therefore, the Stormy Weather Space should be seen as a space which only *includes* the perception of 'now' rather than strictly corresponds to it. This space could also be called the comprehender's 'perceptual reality'.

<sup>91</sup> Note, however, that the wife (i.e. the speaker) also sets up her own Blend, but the role this space plays in her understanding (or realisation) of the situation radically diverges from the function that the husband's Blend has in *his* representation of the wife's utterance. In contrast to the husband's integrating space, the wife's Blend, for instance, does not result in her realisation of a pragmatic inference: first, she is irritated by the nasty weather, which makes her choose the ironic way of expressing herself. This leads her to the creation of a conceptual Blend. In contrast, the husband's Blend is the *driving force* behind his realisation that the wife is irritated: first his Blend is constructed, which then contributes to his realization that the wife feels bad about the weather. In short, the conflicting Blend in the wife is a 'consequence' of her irritation, while the husband's Blend is a 'driving force' leading him to realise that his spouse has become irritated (by the nasty weather).

Alternatively, in her ironic remark the wife might also refer to a weather forecast(er) promising beautiful weather for the days of their planned trip. Consider Figure 9 below:

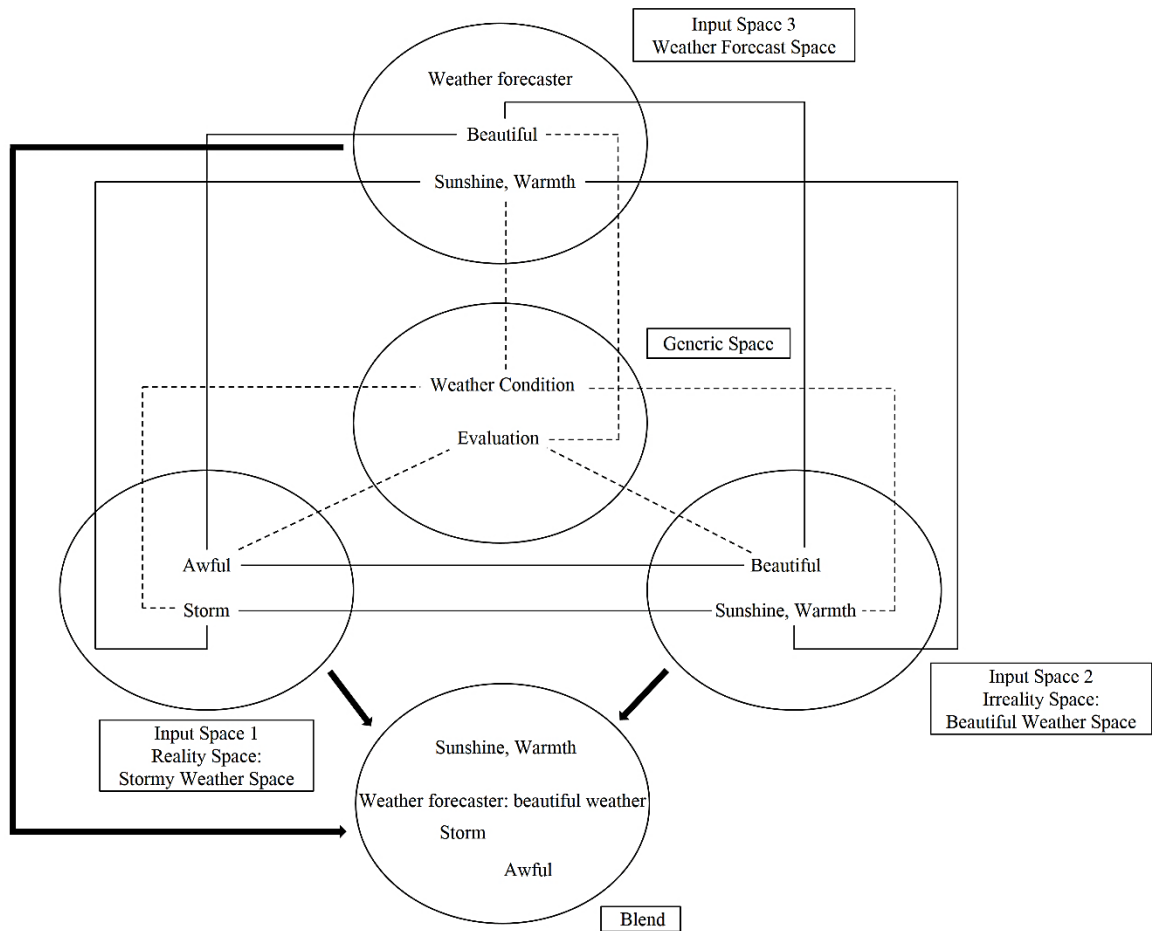


Figure 9. A five-space schematic diagram of the mental space structure of the ironic “*What absolutely beautiful weather*”

As is illustrated above, in this alternative variant of the weather example the representation of the wife’s remark is based upon three input mental spaces: the Reality Space, which incorporates stormy weather, the Irreality Space, which provides mental content about beautiful weather, and finally the Weather Forecast Space, in which a weatherman predicts beautiful weather for the days of the couple’s planned trip. In this variant of the weather example, the forecast is more likely to trigger the speaker’s enunciation. Mental content about the weatherman’s predictions might be present in the hearer as well, and the speaker might know it and rely on it.

Some elements in the inputs can be related as opposites (such as ‘awful’ and ‘beautiful’ in Input Spaces 1 and 2, and ‘storm’ and ‘sunshine’ in 1 and 3), or as identical (or similar) constituents (like ‘beautiful’ in Input Spaces 2 and 3). These relations are indicated by the solid lines in Figure 9.

The Generic Space contains information that is common to all the inputs. The abstract correspondences that exist among those spaces are ‘weather condition’ and ‘evaluation’. These are connected to their values in the inputs by the dashed lines.

The Blend incorporates incongruent content from the Input Spaces: elements of bad weather (e.g., ‘storm’) are projected from the Reality Space, and structure relating to beautiful weather (e.g., ‘warmth’, ‘sunshine’) is inherited from both the Irreality Space and the Weather Forecast Space. The Blend might also include a weather forecaster predicting beautiful weather. That person is projected from Input Space 3. The conflicting Blend makes the hearer realise that the speaker’s enunciation should be taken in a figurative sense.

#### 7.4.2 A Blending Analysis of the Ironic “*Oh, Great – That’s Nice*”

Consider the situation in which someone catches his foot on something, stumbles and sprains his ankle, and, as a reaction, he says: “*Oh, great – that’s nice*”. In this example, a speaker performs an activity and has bad luck. Blaming himself or fate, and feeling disappointed on account of that accident, he then uses irony.

Martin (1992) argues that the representation of the ankle example involves some integration at the conceptual level of organisation (see also Hamamoto 1998). In his study, Martin (1992) suggests that the understanding of this example evokes a ‘possible world’, in which things are as they *should be*. The contrast between reality and this ‘possible world’ is exactly what generates the ironic effect. However, if comparison of these two worlds is possible only if they are blended, the fact that Martin left the notion of ‘possible world’ rather unarticulated in his theory poses the following difficulty for his framework: under certain conceptions it would be impossible for two worlds to be available (that is, to be blended). If taken in the Carnapean sense, for instance, which treats ‘possible worlds’ as fully consistent state descriptions attributing no special status to the ‘actual world’, Martin’s view of irony in a possible-world theory, and also his treatment of the ankle example, is clearly in trouble.

Drawing on the above discussion, (using) obscure terms like ‘possible world’ will be avoided, and the ankle example will be explained in terms of the same types of mental spaces that we used for the discussion of the weather example. Consider Figure 10:

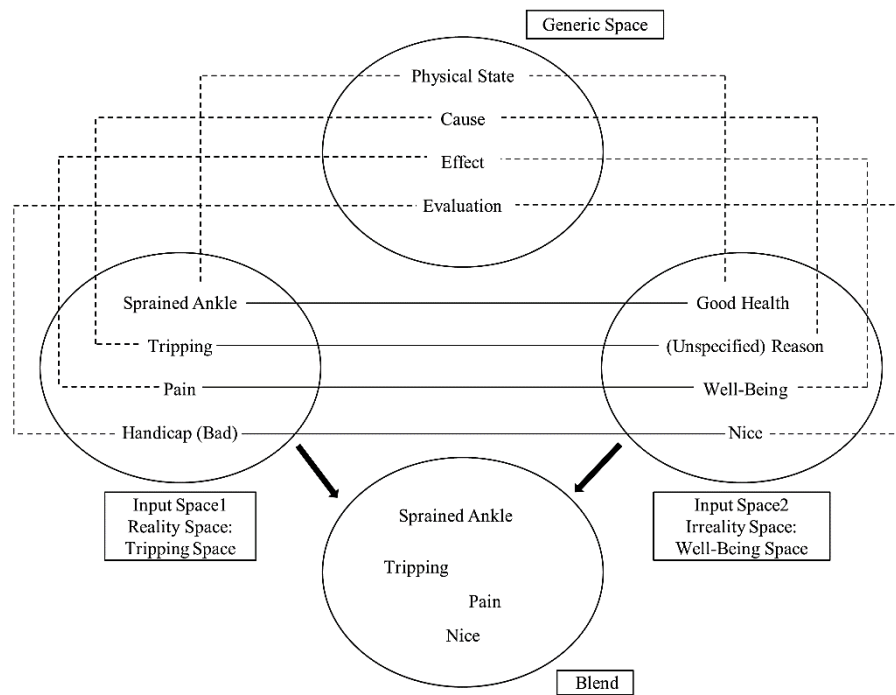


Figure 10. A schematic representation of the mental space structure of the ironic “*Oh, great – that’s nice*”

As Figure 10 indicates, the representation of “*Oh, great – that’s nice*” involves two input spaces: the Reality Space is an experientially grounded folk model. It roughly incorporates the comprehender’s perceptual reality (see footnote 90), and is structured by information that someone trips, sprains his ankle, has pain, and feels bad about the situation. In spite of all these, he evaluates his condition as something desirable and nice.

The comment “*Oh, great – that’s nice*” then opens up an Irreality Space, which contains knowledge about having fine health, since the speaker probably has some good reason that would justify such experience. The speaker’s excellent general condition causes his well-being, which he will then evaluate as ‘nice’. Note, however, that the particular reason for which the speaker has good health and feels well is not identified in this space. Furthermore, the very nature of his well-being is also not specific. As a result, the construction of the Well-Being Space might require more cognitive effort on the part of the comprehender.

The link between the inputs is opposition: spraining ankle pairs with good health, tripping contrasts with some unspecified (though favourable) cause for the speaker’s fine general condition, pain with well-being, and evaluating the accident as bad with something desirable.

The Generic Space contains abstract material from the inputs. These are ‘physical state’, ‘cause’, ‘effect’ and ‘evaluation’.

The Blend inherits partial structure from the input spaces. From the Reality Space tripping, spraining an ankle and experiencing pain are imported. The Irreality Space brings in

some positive evaluation on the part of the speaker. As a result, the Blend incorporates conflicting information, which goes against our folk psychology about a) ‘praising’ (that it usually expresses a feeling of veneration or gratitude, and that it is generally linked to a favourable event), and b) the expected reaction when one sprains his ankle. That is, the Blend contains the following information: someone trips, sprains his ankle, feels pain and yet he evaluates the situation as something positive and nice. The ironic implication is the result of this incongruity.

#### 7.4.3 A Blending Analysis of the Ironic *Killer Cured, Then Executed*

In her attempt to prove that the notion of ‘pretense’ as such appears not to fit all manifestations of irony (see Section 6.6 for more details), Clift (1999) refers to a newspaper roundup claiming that a murderer underwent an angioplasty to clear a blocked artery after a heart attack, and then he was executed by lethal injection for the crime he had committed. The representation of this situational irony can be investigated in terms of the mental space structure given in Figure 11 below:

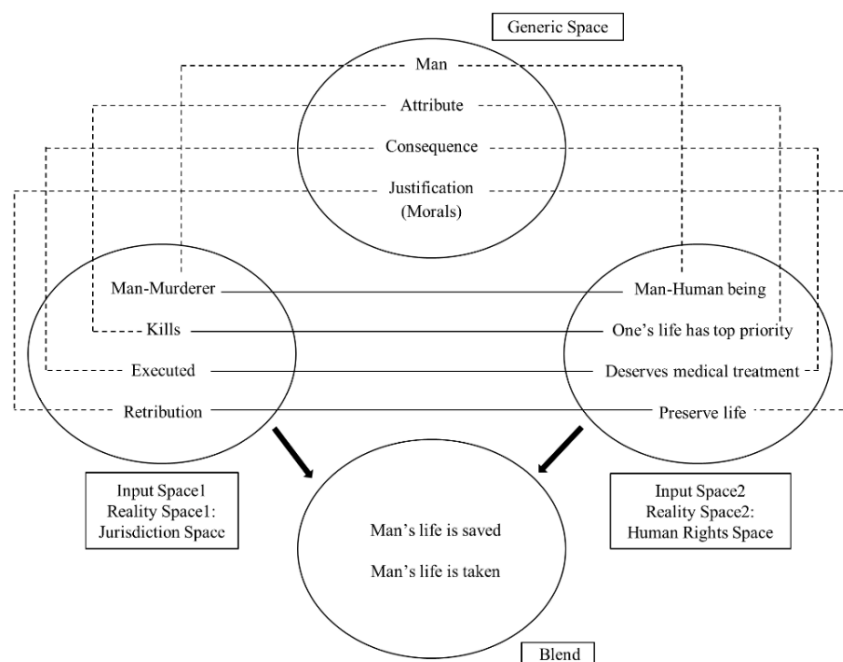


Figure 11. A schematic representation of the mental space structure of the ironic “*Killer cured, then executed*”

As is indicated in Figure 11, the comprehender’s representation of the murderer example incorporates two input mental spaces (both describing certain aspects of reality): the

Jurisdiction Space involves a murderer, who is executed as retribution, and also in order to protect (other) citizens from any potential future crime(s).

The Human Rights Space, on the other hand, contains information about legitimate cultural standards or constitutional human rights: a human being, whose life has top priority, is given access to health care in order to preserve his life.

As the horizontal lines in Figure 11 indicate, the two input spaces incorporate matching information: the murderer from the Jurisdiction Space links to human being in the Human Rights Space, killing to the immeasurable value of life, execution to deserving medical treatment, and retribution to preserving life. The inputs are also related by succession, since if a murderer kills someone, then he is executed for retribution. A similar cause-effect relation can be found in the Human Rights Space: if a human being becomes ill, then he is given medical treatment so that he can recover from his illness.

The correspondences between the inputs are also indicated on a more general level, in the Generic Space: the murderer in the Jurisdiction Space and the human being in the Human Rights Space are both considered to be a ‘man’ in more general terms. Further, killing and viewing life as perhaps the most precious value in the world are both ‘attributes’: while killing characterises the murderer, humans tend to think about life in terms of ‘top priority’. The execution of the murderer, and human beings’ right for medical treatment are logical (or inherent) ‘consequences’ that follow from the very nature of the inputs: while the murderer is executed under the provisions of the law, humans, in general, deserve medical treatment to keep in good health. Finally, retribution in the Jurisdiction Space and preserving life in the Human Rights Space both morally ‘justify’ particular standards: judicial and human rights, respectively.

The Blend contains knowledge that is projected from both inputs: while the Jurisdiction Space provides information about taking a man’s life, the Human Rights Space provides content in which the man’s life is saved. The absurdity of the situation comes from the fact that, despite having diametrically opposite consequences, judicial standards and the standards of health care and human rights apply to the very same person. In other words, it goes against our common sense to save a person’s life in order to take it later on. The irony, thus, emerges in the Blend – and the shorter the time interval between the cure and the execution, the stronger the ironic feeling of awkwardness could be on the part of the comprehender.

It should also be noted that the Blend in the murderer example can also give rise to some ironic effect, if examined in terms of certain political ideologies. For instance, as Lakoff (1996) describes, conservatives in America justify ‘negative action’ on the basis of a metaphorical folk

model, the moral accounting principle: if I do harm to someone, that person owes me something of equal (negative) value. Applying this model to murder, it is only by carrying out the death penalty that the balances of killing someone can be settled. The metaphor is rooted in “Strict Father Morality”, which is a model that children of conservative parents grow up with and live by.

If the murderer example (*Killer cured, then executed*) is interpreted in terms of the conservative, moral accounting principle, then some ironic effect should arise along the following lines: since the murderer deserves death, it is irrational/immoral to apply the positive-action principle, which is enforced by our pro-life ethics, to preserve his life.

### 7.5 Summary of the Chapter

This chapter considers Wittgenstein’s (1953) theory of ‘family resemblances’ and sees examples of irony as members of a group which are related by particular similarity markers, and provides a working definition, which essentially corresponds to the blend-based processing model of irony. This algorithm regards irony as a mode of thought which incorporates projection of incongruent cognitive content from discrepant input conceptual structures into a blended mental space. Resolving the contradiction in the blend leads to emergent implications which most frequently convey some negative evaluation.

In order to see how the blend-based working definition of irony functions in terms of concrete manifestations of this mode of thought, an experiment was conducted. The aim of the study was to collect linguistic examples which ordinary language users considered ironic. Later in the chapter the blending model of irony was tested using some of those items. The analyses of the examples show that the proposed blend-based irony model successfully explains linguistic items which were considered ironic by (the majority of) the participants in Experiment 3.

In Chapter 5 a blend-based hybrid theory of metaphor was presented. Now that a general process of ironic understanding has been proposed and successfully tested in the framework of conceptual integration, let us focus on another aim of the dissertation: to compare and contrast the two (metaphoric and ironic) blend-based representations. This is the subject of the next chapter.



## CHAPTER 8

### STRUCTURAL ALIGNMENT OF METAPHOR AND IRONY

#### 8.1 Introduction

As the introduction in Chapter 1 indicates, metaphor and irony have been subjected to comparative scientific analyses in various kinds of disciplines in order to find commonalities and/or differences between the principles under which these phenomena work. Linguistic, psychological and neuroscientific evidence was outlined to show that metaphor and irony were found to be similar in certain respects, while in others considerable differences were noted between them.

This chapter focuses on another aim of the dissertation and provides novel observations about the similarity-difference issue by aligning an example of metaphoric and ironic structure at the cognitive level of organisation. Thus, the comparison will be accomplished within the framework of cognitive semantics, drawing on notions like, for example, conceptual domains, mental spaces, blends and conceptual mappings. The examples for the comparative analysis are the ironic “*I love people who signal*” and the metaphoric “*The committee has kept me in the dark about this matter*”.

#### 8.2 An Alternative Blending Analysis of the Ironic “*I love people who signal*”

In Section 6.7.2, when discussing Coulson’s (2005a) view of irony in terms of conceptual integration, the ironic remark “*I love people who signal*” was already discussed as a blend. Although Coulson’s explanation of this example is legitimate in the sense that conceptual integration *is* involved in the representation process, as was noted in that section, her model should be re-considered, at least, in terms of the following observation: if, in Coulson’s model, one of the input mental spaces incorporating the actual course of events is seen as what we would normally call ‘reality’, ‘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.<sup>92</sup> Consider Figure 12 below:

---

<sup>92</sup> 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, the speaker’s resentment against the errant driver should become manifest (and overtly expressed) in the Blend, and it just builds (and reflects) upon the generally held folk psychology about deviant drivers.

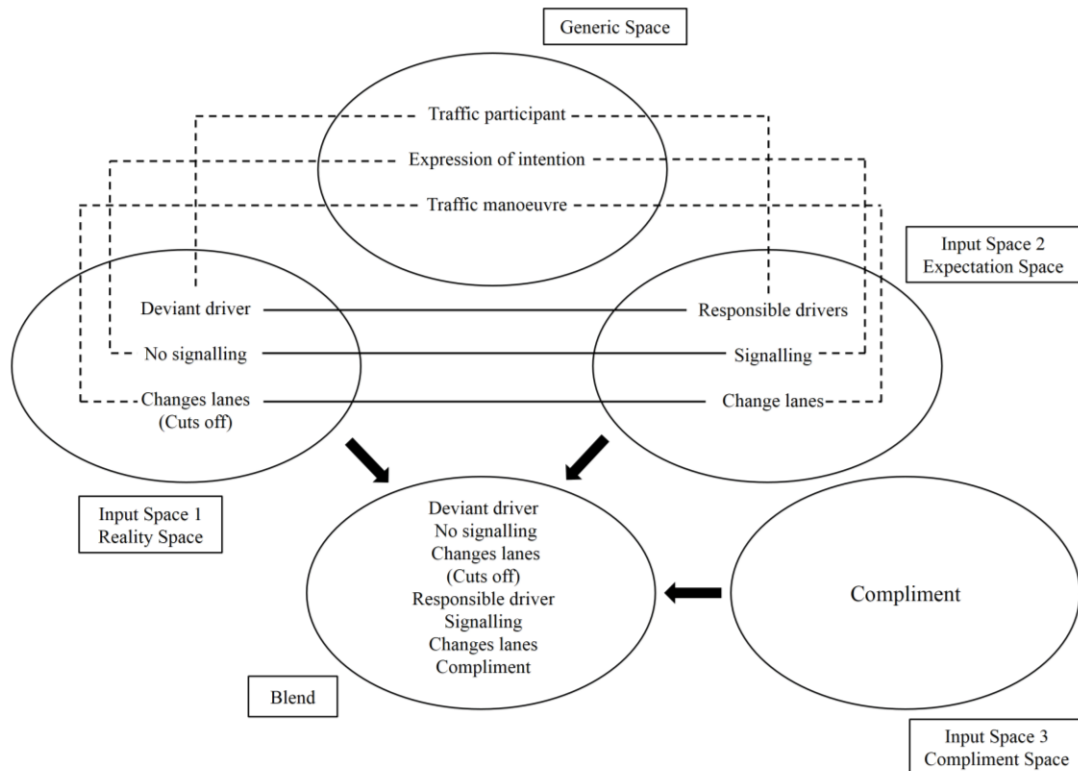


Figure 12. The conceptual integration network of the ironic “*I love people who signal*”

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 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.<sup>93</sup>

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*

<sup>93</sup> It should be mentioned that in Coulson’s (2005a) 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 – see Section 6.7.2). However, in a no less legitimate view, (the act of) complimenting (such) traffic manoeuvres does not generally constitute any particular social expectation. In other words, people are not usually *expected* to praise traffic manoeuvres. Therefore, this alternative analysis incorporates the Compliment Space as a *separate* mental construction.

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.

### 8.3 A Metaphor Analysis of “*The Committee Has Kept Me in the Dark About This Matter*”

In Section 2.3.3 “*The committee has kept me in the dark about this matter*” was already explained in terms of Blending Theory (Fauconnier and Turner 1994, 1998, 2002). This example, however, could also be analysed in terms of the hybrid theory of metaphor, which is proposed in this dissertation (see Chapter 5). Therefore, keeping in mind both the tenets of the Lakoffian traditional metaphor theory, especially the principles of ‘invariance’ and one-way projection, and Fauconnier and Turner’s (2008) conceptual view of metaphor, for the complementary analysis of the committee example, consider Figure 13 below:

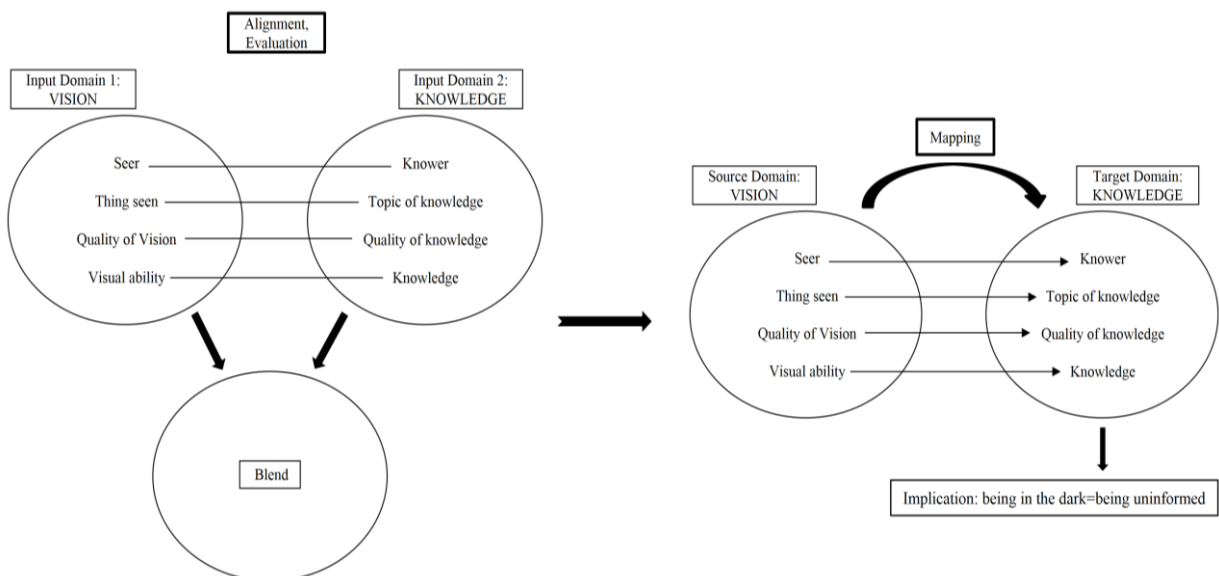


Figure 13. A schematic diagram of “*The committee has kept me in the dark about this matter*”, analysed as a metaphor from a complementary (Lakoffian and blending) perspective

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 and Oakley 2003; Gibbs 2005a; Kövecses 2002, 2005 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 experiencer 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.<sup>94</sup>

#### 8.4 A Blending Comparison of the Deviant Driver and the Committee Examples

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 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).

---

<sup>94</sup> At this point the following observation should be made: in Section 2.3.3, 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* 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, 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*. 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*.

Third, the committee example, which is based upon the KNOWING IS SEEING conceptual metaphor, maps particular entities (for example, ‘seer’ to ‘knower’, ‘thing seen’ to ‘topic of knowledge’) in the blend. In contrast, in the deviant driver irony there is no after-blend mapping in the sense as in the committee metaphor, where one thing/entity (‘knower’) is interpreted/seen in terms of another (‘seer’). That is, although both repC and repD involve mapping to the blend, it is only repC that incorporates mapping from one input to the other.

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, however the speaker remains the same.

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 4.2). That is, the metaphor is basically represented through the experience of having difficulty seeing what is around us in darkness, and of being kept in a dark place.

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 and Turner 1998: 163) from all inputs: one of those frames is structured by reality, another one by the picture of a rule-abiding driver who changes lanes in a responsible fashion and there is also a frame which contains information about the folk understanding of making compliments.

Sixth, 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 dissertation 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.

### 8.5 A Blending Comparison of Metaphor and Irony

Drawing on the discussion in this dissertation, and especially on the comparison of the committee metaphor and the deviant driver irony, the blend-based models of metaphor and irony which the dissertation proposes can be compared according to some criteria. Consider Table 6 below:

Table 6. Comparison of the blend-based models of metaphor and irony

	Aspects of Comparison	Metaphor	Irony
1.	Inputs to mental processes	Domains	Mental Spaces
2.	The number of inputs (to blending)	2	2 or more
3.	Projection (mapping) from one input to another	Yes	No
4.	Elements in the Blend	(Typically) compatible ones	Incompatible elements are allowed
5.	Blending	Yes	Yes

Based on the systematic comparison in Table 6, the following general observations can be made about the relation between metaphor and irony in terms of their blend-based representations:

- 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 can be seen, the analysis and comparison of the committee metaphor and the deviant driver irony provide insight into possible differences between metaphor and irony. However, ‘motivation’ is another aspect which, although does not play a role in making a difference between the committee and the deviant driver examples, should also be considered in order to get a fuller picture of the metaphor-irony distinction.

There are metaphors whose motivation is less salient. It is particularly the case with ‘dead metaphors’, since they have been used so often in common parlance that they have become “lexicalized”, and their force as a “figure of speech” is no longer felt. Consider the following examples: ‘foot of the mountain’, ‘head of state’, ‘arm of the law’.

The processing of these expressions may show little or no motivation, since the alignment-comparison stage, which in this dissertation is proposed to be typical of metaphoric representations, may not be salient in their understanding. Therefore, ‘foot of a mountain’, for instance, might not be seen as incorporating a reference to something in nature in terms of a human body part.<sup>95</sup>

In contrast, ironic blends (representations) need inherently be motivated. Contrary to dead metaphors, ironic examples simply cannot lose their force as figurative language, since the basic (pragmatic) goal of ironic communication is, through incongruent mental constructions and motivated cognitive processes, to make the hearer realise that the enunciator uses figurative language.

As the systematic comparison of the blend-based processing models of metaphor and irony 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 the introduction in Chapter 1 for discussion and references), the dissertation also vindicates the claim that metaphor and irony are *not* understood by identical processing mechanisms.

---

<sup>95</sup> Note that little or no motivation applies mostly to dead metaphors. According to Pelyvás (personal communication, 2016), even entrenched metaphors (like the one in the committee example) show motivation in the Blend, since it is “at work”.

It might also be relevant to mention that perhaps contrary to expectation, the career of metaphor hypothesis (Bowdle 1998; Bowdle and Gentner 1995, 1999, 2005; Gentner and Bowdle 2001; Gentner and Wolff 1997; Wolff and Gentner 2000) is not compatible with the idea that some metaphors lack motivation. According to the career of metaphor view, as metaphors become increasingly conventional, there is a (gradual) shift in the mode of their understanding from comparison to categorization. Comparison means alignment and inference processing, categorization refers to a process in which the hearer sees “the target concept as a member of the superordinate metaphoric category named by the base term” (Bowdle and Gentner 1999: 91). As an example, in the understanding of “*My job is a jail*”, the base concept (JAIL) elicits the following category: ‘any situation that is unpleasant and confining’. The metaphor, then, is understood as an assertion that ‘my job’ is a member of this category.

As Bowdle and Gentner propose, although in a less salient manner, even *categorization* incorporates “some kind of alignment of representations to establish commonalities and guide the possible inheritance of further properties” (2005: 199). This means that motivation plays a part not only in comparison but also in categorization.

## **CHAPTER 9**

### **METAPHOR, IRONY AND BLENDING: AT THE INTERFACE OF NEUROLOGY, PSYCHOLOGY AND SEMANTICS**

#### **9.1 Introduction**

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).

This chapter investigates 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 the present chapter 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.

#### **9.2 Neurocognitive Correlations of the Alternative Hybrid Model of Metaphor**

In Chapter 5 an (alternative) complementary model of metaphor was proposed and used to illustrate the representation of the dead-end street example (“*Our relationship has hit a dead-end street*”). For purposes of this section let us sum up the model below. Consider Figure 14 below:



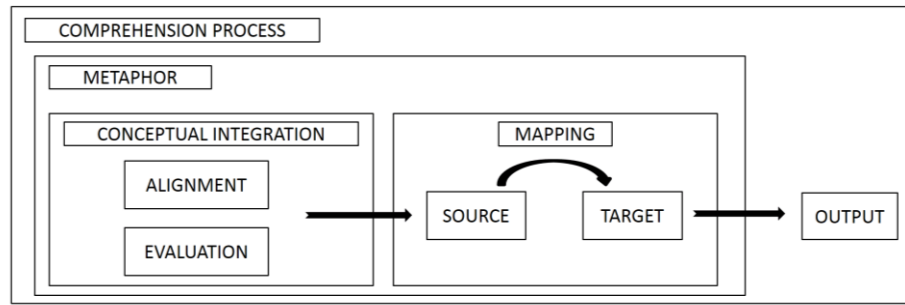


Figure 14. The schematic representation of the alternative hybrid model of metaphor

According to this hybrid theory, the representation of metaphor incorporates two stages: first, in the blending phase, two conceptual domains are aligned and evaluated. Then, if the potential source and target structures are compatible in the blend, cross-domain mapping occurs. Thus, this model predicts a sequential process, where both semantic integration and conceptual mapping presuppose cognitive effort and a certain span of processing time on the part of the comprehender. Therefore, it is presumed that the blending and mapping phases of metaphoric processes are cognitively taxing, especially in the case of novel metaphors. Now, let us see if this presumption is compatible with data from the neurocognitive literature.

Arzouan et al. (2007) time how long it takes for the experimental subjects to judge whether two-word expressions, which they are exposed to on a monitor, convey literal, metaphoric or no meaning. In the experiment, the N400 of the second word in each word pair was measured, and was shown to vary as a function of expression type in a graded and systematic fashion: the amplitude was increasing from literal expressions<sup>96</sup> to conventional metaphors ('lucid mind'), to novel metaphors ('ripe dream') and to unrelated word pairs ('indirect blanket'). The gradedness of the N400 values in this experiment seems to reflect different degrees of processing difficulty. This fits well with the alternative hybrid model of metaphor which is proposed in Chapter 5: greater N400 amplitudes for novel metaphors indicate that more taxing cognitive effort is needed to establish cognitive links between elements of distantly related domains. That is, the time alignment, evaluation and mapping take in the comprehension process largely depends on the extent to which the input domains have related structures in the blend. Conventional metaphors are easier to process than novel ones, since they are more frequently used and the degree of inter-domain similarity is higher. These factors contribute to a smoother and faster metaphorisation process, assuming that no larger structures are stored as entrenched units, since in that case the representation is not motivated.<sup>97</sup>

<sup>96</sup> Arzouan et al. (2007) do not provide an example of the literal experimental stimulus in their study.

<sup>97</sup> See the discussion on dead metaphors in Section 8.5.

In Coulson and Van Petten's (2002) ERP experiment, the subjects had to read sentences ending with words used literally, metaphorically or in the so-called 'literal mapping' condition:

(48) The stone we saw in the natural history museum is a gem. (literal)

(49) After giving it some thought, I realised the new idea was a gem. (metaphorical)

(50) The ring was made of tin, with a pebble instead of a gem. (literal mapping)

In the literal use of 'gem' in (48), the subjects had to establish mappings between 'the stone we saw in the natural history museum' and 'a gem', on the basis of category membership. According to Coulson and Van Petten (2002: 960), the comprehension of (48) incorporates "fairly minimal retrieval and comparison of conceptual structure associated with the two objects in question".

In contrast, the metaphoric use of 'gem' in (49) presupposes a cognitive process in which the speaker's idea is mapped analogically onto the concept of a gem. As Coulson and Van Petten explain, in the representation of this metaphor only some of a gem's typical attributes are imported into the blend, in which jewels and thoughts overlap. Two of those qualities could be 'value' and 'rarity', although the authors mention 'clarity', which, according to them, refers to both the unimpeded passage of light in a gem and the unimpeded passage of knowledge in an idea. 'Clarity', however, may not be the most typical common attribute of jewels and thoughts to be projected into the blend in the representation of (49).

In the 'literal mapping' condition in (50), gem is used in a fully literal sense. The understanding of this example incorporates fairly extensive mapping between the pebble in the tin ring and a gem in a more prototypical ring. According to Coulson and Van Petten, there are some common properties of pebbles and gems (shape, size and hardness) which fill the same slots in the relational structure of a ring.<sup>98</sup> Successful mapping results in one's understanding that a pebble can top a toy ring in the same fashion as a gem can top a piece of fine jewellery.

As Coulson and Van Petten explain, literal mapping is a condition midway between metaphoric and literal language. They suggest that similarly to other literal uses, literal mappings "appeal to the literal meaning of the term and involve concrete attributes of the relevant concepts" (2002: 960). However, like metaphors their understanding incorporates conceptual blending and "mappings" between two cognitive models.

---

<sup>98</sup> Similarly, stone and gem may also be related in (48) by the attributes shape, size and hardness. However, unlike stone and gem in (48), pebble and gem in (50) are *not* related by hyponymy: they do not belong to the same category.

The goals of Coulson and Van Petten's study were to determine whether metaphors were more difficult to understand than literal sentences, and to evaluate the continuity of literal and metaphoric language by incorporating the interim category of 'literal mapping'.

In their experiment the subjects read sentences that ended with words used literally, metaphorically, or in the literal mapping condition. The sentences were presented on a computer screen. Coulson and Van Petten measured ERPs from 300 to 500 msec after the onset of the sentence-final words. They found that literal endings elicited the smallest N400, metaphors the largest, whereas literal mappings elicited an N400 of intermediate amplitude.

The finding of larger N400 effects for metaphors than for literal mappings in Coulson and Van Petten's study is compatible with the alternative hybrid model of metaphor proposed in this dissertation. According to this complementary account, metaphor incorporates blending *and* conceptual mapping (extension) from one domain to another. As a prediction, cognitive processes (e.g., 'partial metaphors', as Coulson and Van Petten treat 'literal mappings') which incorporate only parts of the hybrid model (of metaphor) are simpler and perhaps cognitively less challenging (in case no other additional mental processes are also at work). Although Coulson and Van Petten's explanation of metaphor incorporates blending *and* mapping between conceptual structures, their account of literal mapping involves *only* conceptual integration. Thus, for lack of inter-domain mapping, Coulson and her associate's interim literal–metaphoric condition presupposes simpler representational processes than does a full-course metaphorical extension (which inherently features inter-domain mappings as well). Logically, as Coulson and Van Petten's experiment also attests, for less complex cognitive processes the hybrid metaphorical model predicts less taxing representation and thus smaller N400s.

### 9.3 Neurocognitive Correlations of a Blending Account of Irony

In Sections 7.4.1, 7.4.2 and 7.4.3, irony is described as a (cognitive) phenomenon whose representation incorporates the following on-line mental constructions: Input Spaces, a Generic Space and a Blend. For a general outline of the mental space network which the dissertation proposes for ironic representation, consider Figure 15 below:

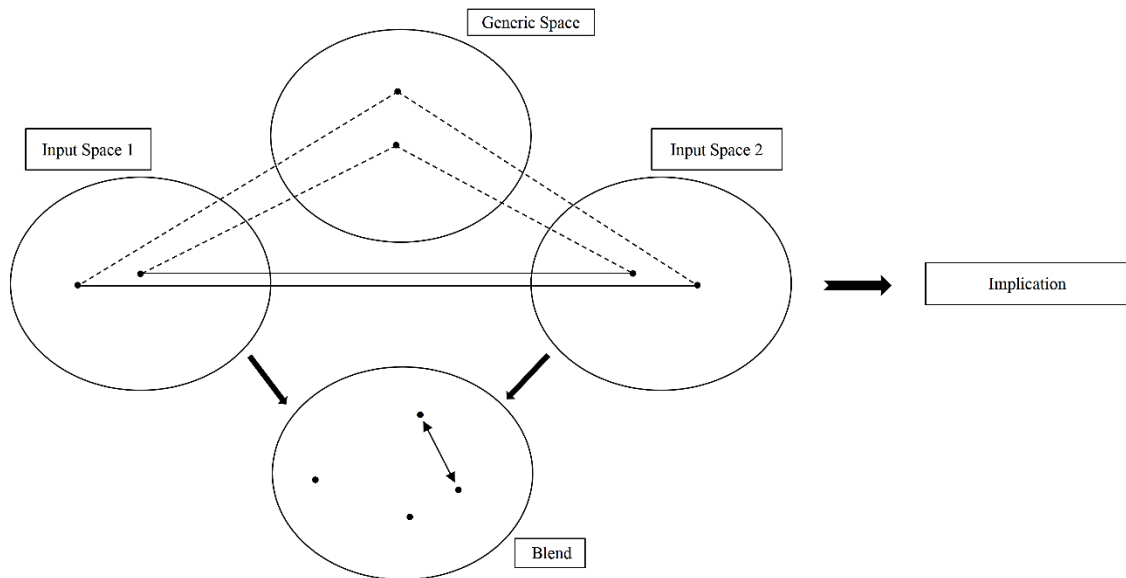


Figure 15. The schematic diagram of the blending account of irony

As the above illustration shows, the representation of irony incorporates conceptual integration. In this process, information from at least two Input (mental) Spaces (ephemeral, on-line and dynamic cognitive constructions) is projected into the Blend, resulting in an incongruent conceptual structure. The Generic Space indicates the correspondences that exist between the Input (mental) Spaces at an abstract level. Drawing on contextual information, the hearer/reader infers that the speaker/writer (most often) expresses some negative evaluation (see Sections 7.4.1, 7.4.2 and 7.4.3 for examples and illustrations). This inference manifests itself in the form of an implication.

From this blending treatment of irony the following assumption can be made: since ironic blends incorporate conflicting elements (which are imported from the inputs), the comprehension of those phenomena should incorporate more cognitive activity than, for example, the representation of metaphor. That is, making sense of incongruent ironic blends would require extra processing effort (N400) on the part of the comprehender.

Cornejo et al. (2007) found evidence for the N400 effect in ironic representation. They investigated whether applying different analytic strategies influences the processing of irony. The experimental subjects were instructed to listen to an audio recording which described a situation. When the audio had finished, a sentence appeared on a computer screen. Then, the subjects were asked to classify each sentence (literal, ironic or nonsensical) as coherent or incoherent with the preceding context. However, the classification task was accomplished in two different conditions: half of the subjects were instructed to make their judgements in the so-called 'analytic condition', where the discrimination was based upon the formal aspects of

language. As Cornejo et al. (2007) explain, the subjects in this condition were asked to decide whether the final sentence was coherent or not with the story that was presented. To do so, it was important that the subjects consider the meaning of the sentence and whether or not it was congruent with the story. The other half of the subjects made their decisions (about (in)coherence) in the ‘holistic condition’, where they were asked to consider “if the sentence would make sense in real life” (2007: 416).

The results show larger N400 negativity for ironic sentences as compared to “literal” ones in the holistic condition. According to Cornejo et al., this indicates that the prevailing feature in this case is global semantic comprehension, which is associated with “a larger demand of cognitive resources” (2007: 423).<sup>99</sup> This claim is compatible with the (cognitive semantic) assumption that in contrast to “non-literal” understanding, the representation of irony may incorporate a cognitively more challenging incongruous blend.

#### **9.4 Irony is More Difficult to Understand than Metaphor: Psychological and Semantic Considerations**

Metaphor and irony are modes of thought that are occasionally weighed against each other in various academic disciplines. Section 1.1 contains short notes on the most significant (comparative) studies. Of those, one of the most relevant analyses for the discussion here is that of Colston and Gibbs (2002), which therefore needs to be discussed in a bit more detail.

In four experiments Colston and Gibbs examined differences in how people understand ironic and metaphoric statements. They hypothesised that the representation of irony requires more complex inferencing processes than does the understanding of metaphor because irony reflects speakers’ second-order, meta-representational thoughts. This phenomenon is generally referred to in the literature as ‘mentalizing’ or ‘theory of mind’ (ToM): the ability to attribute beliefs and intentions to other people in order to explain or predict their behaviour (cf. Frith and Frith 2003). In relation to ironic representation, ToM capabilities refer to the ability of the

---

<sup>99</sup> Regel et al. (2011) found no trace of the N400 effect (i.e. semantic integration difficulty) in ironic representation. However, their experiment revealed a large late positivity, the so-called P600 component. This brain potential is considered to reflect syntactic processes associated with structural re-analysis or repair (Osterhout and Mobley 1995), syntactic integration (Kaan et al. 2000) or enhanced syntactic complexity (Friederici et al. 2002). However, since the earliest reports of this ‘syntax-related ERP’, there has been debate and controversy regarding the underlying processes of this component. Most recently, the P600 effect has been considered as a reflection of reanalysis and interpretation processes based on semantic information (Ericsson et al. 2008). In spite of this, Regel et al. (2011) associate the P600 component with pragmatic interpretation processes.

However, it is difficult to evaluate Regel et al.’s results, since in their study it is not clear what exactly they mean by ‘semantic’ and ‘pragmatic’ information. The researchers seem to treat them at two different levels of analysis. This contrasts with the cognitive semantic view that there is no principled distinction between semantic and pragmatic knowledge (cf. Section 2.2.1).

hearer to ‘read’ the speaker’s mind, and to recognise that he/she is using “non-literal” language to express (most often) some negative evaluation (Channon et al. 2005; Happé 1993; Pexman and Glenwright 2007; Shibata et al. 2010; Spotorno et al. 2012; Uchiyama et al. 2006).

In their (psycholinguistic) experiment, Colston and Gibbs used identical statements that occurred either in an ironic or a metaphoric context. Consider the following situations:

a) You are a teacher at an elementary school. You are discussing a new student with your assistant teacher. The student did extremely well on her entrance examinations. You say to your assistant, “*This one’s really sharp*”.

b) You are a teacher at an elementary school. You are gathering teaching supplies with your assistant teacher. Some of the scissors you have are in really bad shape. You find one pair that won’t cut anything. You say to your assistant, “*This one’s really sharp*”.

As Colston and Gibbs explain, in the first situation “*This one’s really sharp*” has a metaphorical meaning, since the teacher refers to the student’s intellectual abilities, where the mind is conceived as a cutting instrument (the sharper a cutting instrument is, the more a person is considered as possessing greater intellectual abilities).

“*This one’s really sharp*” has an ironic implication in the second context. The assistant has either seen the enunciator try the scissors or knows that the speaker has problems with them. The ironist expresses his negative evaluation of the scissors he is using, and, at the same time, refers to his desire of possessing sharp scissors.

In this experimental procedure, Colston and Gibbs seated participants in front of a computer and instructed them to read stories (like the ones in ‘a’) and ‘b’) above) on the screen. Then, those in the experiment were instructed to press a particular key as soon as they had read and understood each line of the story. When the participants had read the last line of each story, a paraphrase sentence (which reworded the speaker’s message) was shown. The subjects’ second task was to make paraphrase judgements by pushing a button as quickly and accurately as possible. Colston and Gibbs measured response latencies in connection with pressing the comprehension button and the paraphrase judgement keys.

Colston and Gibbs’ experiment revealed that subjects took longer to understand identical statements when used ironically than when seen as metaphors. They also showed that the experimental subjects drew second-order meta-representational inferences about speakers’ intentions and beliefs (cf. ToM) when processing irony but not metaphor. That is, as Colston and Gibbs claim, irony is more time consuming to understand than metaphor partly because the

representation of irony “specifically demands that listeners draw a second-order inference about a speaker’s beliefs in a way that it is not necessary when interpreting metaphor” (2002: 75).

Although the claim that irony requires mentalizing capabilities could be true, Colston and Gibbs are unclear about their attitude to ToM in terms of the ironic and metaphoric understandings. They claim that “people draw second-order meta-representational inferences about speakers’ intentions and beliefs when understanding ironies *but not metaphors*” (2002: 57; the emphasis in italics is added). Later in their study, however, Colston and Gibbs acknowledge that “*both* forms of figurative language [i.e. both metaphor and irony] require that listeners recognize something about speakers’ beliefs and intentions” (2002: 59; emphasis added). Finally, as Colston and his associate explain, in irony understanding “listeners draw a second-order inference about a speaker’s beliefs in a way that it (sic) is not necessary when interpreting metaphor” (Gibbs and Colston 2002: 187). That is, both forms of figurative language presuppose some mentalizing capabilities. However, those ToM attributes *differ* in some way.

In their study, Colston and Gibbs do not adequately explain either the nature of the ironic and metaphoric mentalizing capabilities or the possible difference(s) between them. Therefore, although the observation that ironic statements take more time to understand than metaphoric ones could be correct, an alternative explanation (for this finding) may be needed.

The blending alignment of metaphor and irony which is performed in Section 8.5 more adequately explains Colston and Gibbs’ finding that the understanding of irony tends to be more time consuming than the representation of metaphor. Based on the (blending) comparison in that section, the following presumptions can be made in support of Colston and Gibbs’ observation:

- RepI (the representation of irony) was described as incorporating mental spaces, while repM (the representation of metaphor) involves conceptual domains. While mental spaces involve complex, temporary mental structures, conceptual domains tend to be more general, stable and (more) abstract conceptualisations. Processing difficulty/time might in part depend on the complexity of the elements in the understanding process.
- While repM originally incorporates two input conceptual domains in the blending phase, repI can have more than two (see the deviant driver example in Figure 10). Logically, the more input mental constructions a cognitive process incorporates, the more cognitively taxing it will be.
- 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. Conflicting mental

structures (the blends in ironic examples) appear to be processed in a longer time than more consistent conceptual constructs (i.e. metaphors).

It may be assumed that in metaphor, blending and projection from source to target take less time than ‘making sense of’ incongruent ironic blends, where, in neuroscientific terms, ToM processes are at work.<sup>100</sup> That is, longer processing times are attributed to irony despite the presumption that while metaphorisation is a two-stage process, irony incorporates ‘only’ a blend.

Drawing on further evidence in neurosciences, the forthcoming sections in this chapter relate empirical data to the assumed presence of blending in metaphoric and ironic representations, and to the blending distinction between metaphor and irony (see Section 8.5).

### 9.5 Neural Distinctions of Metaphor and Irony

The blending model of metaphor proposed in the dissertation presupposes that the comprehender is able to mentally align concepts and find commonalities between them. On the other hand, the representation of irony requires the listener or reader to go beyond and resolve conceptual incongruence. Because of this difference, it would be reasonable to expect to find different neural correlates for metaphor and for irony. Bohrn et al. (2012: 2669), for example, argue that “more analytic, semantic processes are involved in metaphor comprehension, whereas irony/sarcasm comprehension involves theory of mind processes”.<sup>101</sup> In their quantitative meta-analysis of 22 fMRI studies, Bohrn and her associates are in line with theories proposing essentially different brain areas and hemispheric bias in ironic and metaphoric representations.

Functional magnetic resonance imaging (fMRI) is a functional neuroimaging procedure which uses MRI technology to measure and map brain activity by detecting changes associated with the flow of blood. This technique is based on the observation that cerebral blood flow and neural activation are strongly connected. That is, when an area in the brain is in use, there is an increase in blood flow to that region.

The fMRI investigations of metaphor and irony are inconsistent because most often different experimental parameters are used in them. Variations could be seen in terms of the

---

<sup>100</sup> However, to make such a claim, using *identical* statements (with ironic or metaphorical meaning) as experimental stimuli may not be sufficient. In order to obtain more reliable results in terms of the processing times of the *same* experimental stimulus used as irony or metaphor, the items in the experiment should be (somehow) standardised in terms of specific criteria like aptness or entrenchment. In other words, comparing the processing times of the same examples used in different figurative contexts may provide more reliable results if those items showed, among others, similar aptness or entrenchment values/attributes. This prediction is not taken into account in Colston and Gibbs’ experiment.

<sup>101</sup> For a review of the literature on both similar and opposing views, see Section 1.1.



complexity of the experimental items (word pairs, phrases, sentences), the ‘difficulty’ of the items (conventional metaphors, novel metaphors), the modality applied (visual, auditory), substantial variance in language (for example, English, German, Hebrew), or difference in age/gender distribution (of the subjects in the experiments).

In spite of variations in experimental parameters, Bohrn and her colleagues suggest that both metaphor and irony use a bilateral network with dominance in different hemispheres. In their meta-analysis they conclude that “while specific activation patterns with extensive overlap in the left IFG [inferior frontal gyrus] emerged for the processing of metaphors and idioms, the processing of irony and sarcasm was associated with medPFC [medial prefrontal cortex] and right fronto-temporal activations” (Bohrn et al. 2012: 2676). This shows that, according to neuroscientific evidence, metaphor and irony have different hemispheric bias.

## **9.6 Conceptual Integration in Schizophrenic Patients**

Besides general scientific interest, research on the neural mechanisms of metaphor and irony has attracted some interest in the context of schizophrenia research (Kircher et al. 2007; Rapp et al. 2004; Rapp et al. 2010). A number of recent studies have demonstrated that schizophrenic patients have difficulty decoding figurative language (Sprong et al. 2007; Varga et al. 2014).

This section aligns the alternate blending explications of metaphor and irony proposed in this dissertation and some influential neurocognitive studies about cognitive processes in schizophrenics. In doing so, possible interdisciplinary (semantic-neurocognitive) relations will be identified in terms of metaphoric and ironic representations. Of particular interest is exploring the role of conceptual integration in the processing of metaphor and irony in cognisers (i.e., patients) suffering from schizophrenia. Another aim of this section is to see whether neurolinguistic discussion of the understanding of metaphor and irony in schizophrenia has any implications about the difference between ironic and metaphoric representations (across the board).

One project offering insight for the interdisciplinary analysis in this section was carried out by Varga (2015). In it, a group of schizophrenic patients was examined in order to see what role IQ had in the representation of metaphor and irony. In Varga (2015), the researcher used (short) passages depicting ironic scenarios or a metaphor (either a conventional or a novel one). The stories were presented verbally to the subjects. After each task, questions were asked to see if the patients had properly understood the metaphor or the speaker’s ironic intent.

As part of Varga’s experiment, in a separate task, patients were told (short) stories in which the four Gricean maxims (quality, quantity, manner, relation) were infringed. Similar to

the irony and metaphor tasks, after the scenarios had been presented to the patients, questions were asked to see if they had properly understood the stories. One was the so-called ‘linguistic question’ (Is the speaker’s utterance strange in any way?) to find out if the patients had recognised that the speaker’s utterance was true/real or not. The other question (What did the listener really think when he gave his reply?) was asked to determine to what extent, if at all, patients relied on their ToM capabilities in their representations: whether or not they were able to attribute (the appropriate) mental states to the enunciator. The same tasks were also presented to a control group consisting of healthy subjects. Results from the schizophrenic and the control groups were occasionally compared in order to make inferences about the representation of figurative speech in schizophrenia.

### 9.6.1 A Neurolinguistic Approach to Understanding Irony in Schizophrenia

In her investigation, Varga (2015) found that the ability to decode irony was significantly related to IQ: higher-IQ ( $IQ > 106$ ) schizophrenia patients performed significantly better at recognising irony than those with a lower IQ ( $IQ \leq 106$ ). Although even patients with a high IQ performed badly in the maxim-infringement condition, the significant between-group difference disappeared in terms of irony recognition when the higher-IQ schizophrenia subgroup was compared to healthy controls. As Varga explains, although the members of that subgroup showed ToM deficit, in their recognition of irony they might have relied on an algorithmic compensatory mechanism, the so-called ‘reality-based shortcut strategy’ (RBSS) (Győri et al. 2004). This process is comprised of the following steps: 1) the contextual reality of the story is represented, 2) the literal meaning of the (ironically intended) utterance is represented, 3) the two representations are compared, 4) the literal meaning is either kept as the “real” meaning, or its opposite is taken and 5) context-appropriate state is attributed to the speaker.<sup>102</sup>

Although schizophrenic patients, especially those with a higher IQ, did not perform significantly worse than the control group in the irony tasks, significant differences could be seen in the ToM questions of the conversational implicature (maxim-infringing) tasks (see also Varga et al. 2014). That is, schizophrenic subjects were able to realise (the fact) that a maxim

---

<sup>102</sup> As Győri et al. (2004) hypothesise, the reality-based shortcut strategy is available for subjects with autism. However, there is evidence in the literature that not only schizophrenic but also autistic patients show ToM dysfunction and impaired figurative language understanding (Baron-Cohen 2000). Therefore, Varga’s presumption that Győri et al.’s reality-based shortcut strategy might equally apply to (higher-IQ) patients with *schizophrenia* may sound logical but needs further investigation.

had been flouted. However, they had difficulty deciphering the enunciators' mental states or their pragmatic intentions.

Varga's observations about ironic processing in schizophrenia can be approached in terms of the blending explication of irony proposed in the dissertation. This may be more effectively accomplished by aligning an ironic and a conversational implicature example in a blending framework. Consider the following items which Varga used in her experiment:

a) Kate and Brian went out to dance. While dancing, Brian tripped Kate up and Kate remarked *"You really are a good dancer."* (irony)

b) David asks Judy where she works. Judy replies:

*"I am a chef on the Moon."* (infringement of the maxim of quality)

As mentioned earlier, in Varga's experiment schizophrenic patients with a higher IQ processed irony with relative success. Furthermore, although they were able to detect the infringement of a maxim, they had remarkable difficulty understanding the enunciator's pragmatic intent. In light of these observations, for a schematic representation of the above examples, consider Figure 16 below:

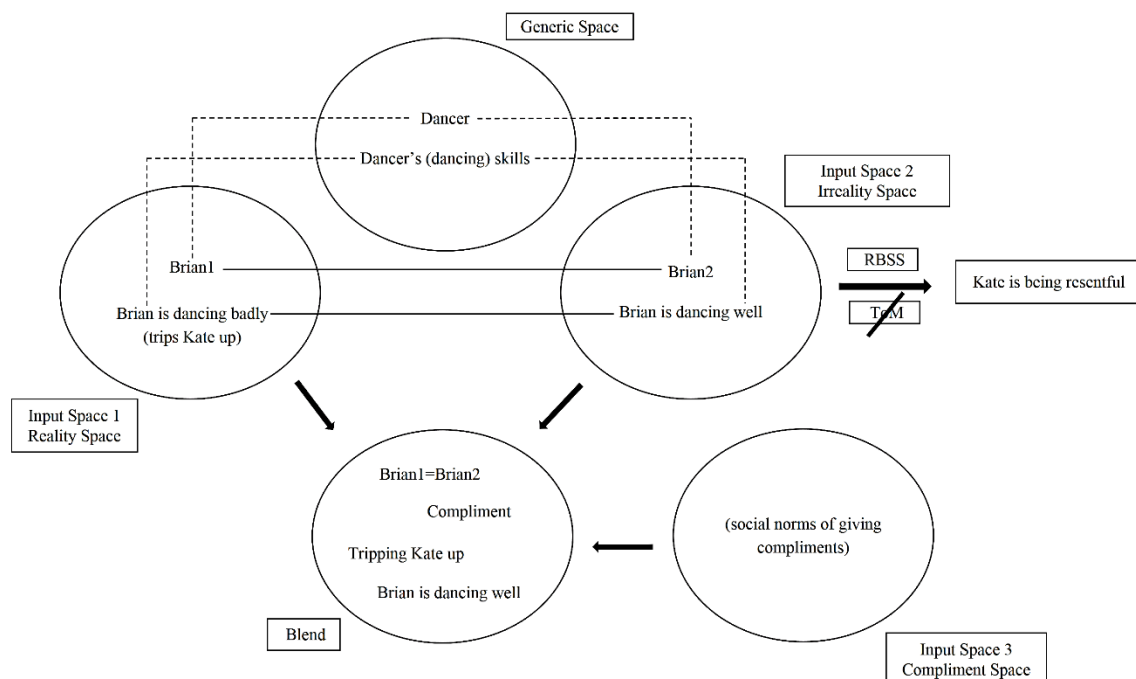


Figure 16. A schematic diagram of the mental space structure of the ironic *"You really are a good dancer"* in higher-IQ schizophrenic patients

As is illustrated in the above figure, a schizophrenic patient's representation of the ironic "*You really are a good dancer*" may consist of three input mental spaces: in the Reality Space, Brian1 is a clumsy dancer since he trips Kate up. Input Space 2 incorporates Brian2, who is a good dancer. The third input involves elements of complimenting: people may express praise or congratulation if someone has done something (they consider) admirable. The Blend contains information which is projected from the inputs. In this mental construction the two Brians, which are mapped from the Reality Space and the Irreality Space, are identical. The Blend contains incongruous material: although Brian trips Kate up while dancing, he is considered a good dancer and is praised for his dancing skills.<sup>103</sup> Elements of complimenting someone are imported from Input Space 3. The Generic Space contains information which is common to the inputs. The categories in this space refer to the dancers and their (dancing) skills.

If Varga's presumption that Györi et al.'s (2004) reality-based shortcut strategy might be used by schizophrenic subjects (with a higher IQ) in their representations of irony is correct, the incongruity in the Blend may be resolved by the RBSS.<sup>104</sup> This makes it possible for those suffering from schizophrenia to decipher in the dancer example that Kate is being resentful.

Varga et al. (2014) observe that lower-IQ schizophrenia patients show significant impairment in understanding irony, and suggest that these patients rely on compensatory strategies like RBSS to a *smaller* extent than do patients with a higher IQ. Consider Figure 17:

---

<sup>103</sup> Note that Györi et al.'s (2004) RBSS incorporates the integration of 'contextual reality' and the 'literal meaning of the ironically intended utterance'. However, in accordance with the model of irony proposed in the dissertation, Figure 16 focuses on conceptual structures rather than on vague notions like 'literal meaning'.

<sup>104</sup> As Varga explains, although these patients make use of RBSS as a compensatory strategy, it is not probable that their ToM capabilities are available to decipher the enunciator's mental states.

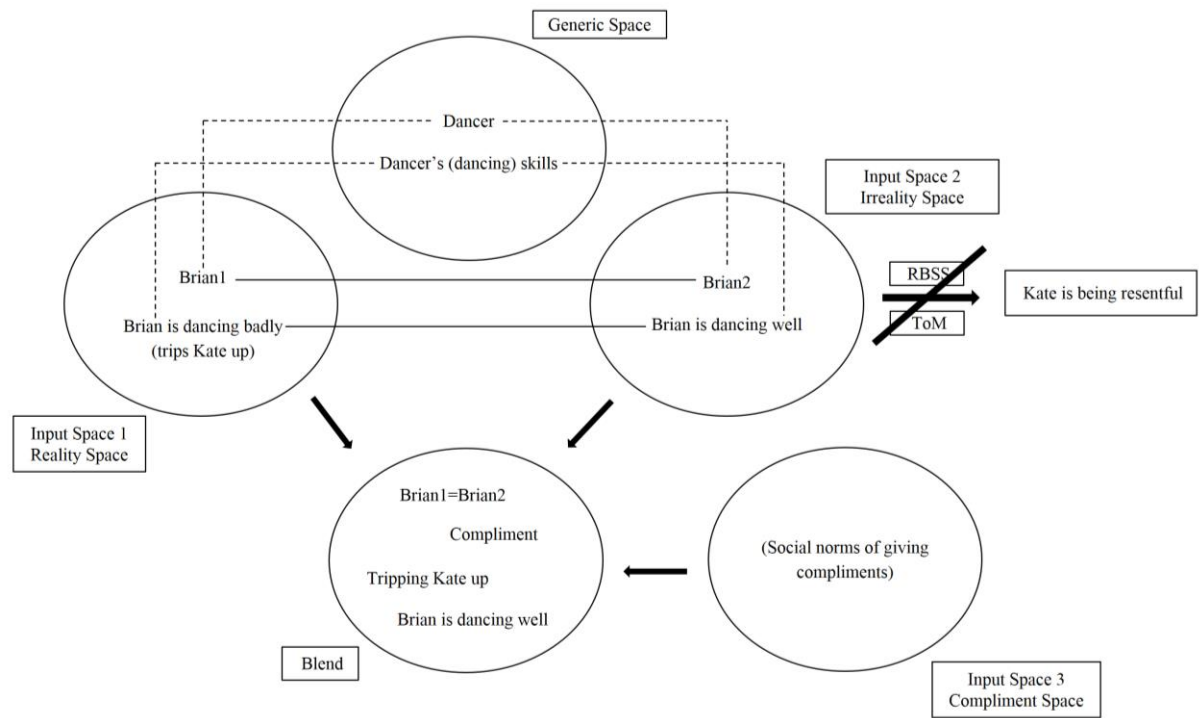


Figure 17. A schematic diagram of the mental space structure of the ironic “*You really are a good dancer*” in lower-IQ schizophrenic patients

As the above diagram illustrates, the representation pattern in schizophrenic subjects with a lower IQ may, to some extent, be similar to that found in patients of schizophrenia with a higher IQ. The basic difference, however, is that although lower-IQ subjects also project mental content from the Inputs to the Blend, they are (most often) unable to understand the implied message, since they have no (effective) means at hand (for example, ToM or RBSS) to resolve the incongruous Blend.

The idea that these patients do reach the blending stage in their understanding of irony might be supported by Varga's investigation, which involves the processing of short scenarios in which the maxim of quality is infringed. Let us consider the schematic representation of one of those examples, "*I am a chef on the Moon*":

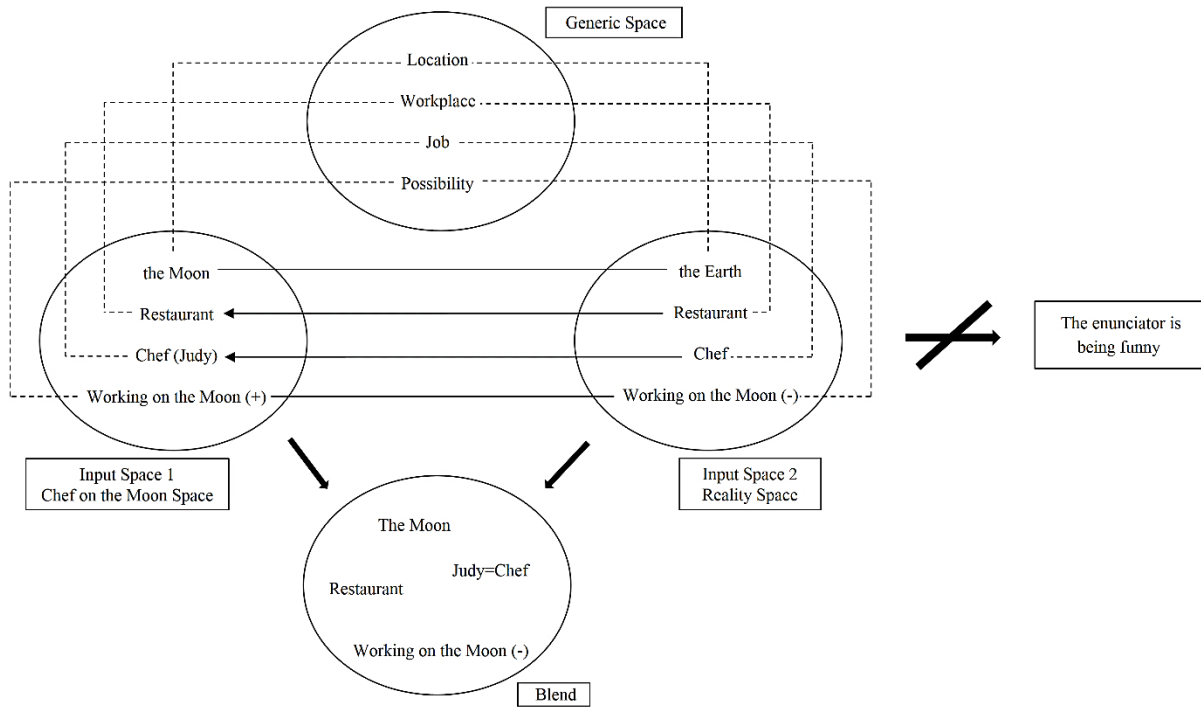


Figure 18. A schematic diagram of the mental space structure of "*I am a chef on the Moon*" in schizophrenia

The chef example, which is an infringement of the maxim of quality, incorporates an enquirer (David) who asks his partner (Judy) where she works. In her reply she says something which is, most probably, counterfactual at the time of speaking, since being a chef on the Moon is clearly fictional (today).

The representation of the chef example in lower-IQ schizophrenic patients incorporates four mental spaces: Input Space 1 contains Judy, who is working on the Moon as a chef. In this space being a chef on that satellite is possible (hence the plus sign in parentheses after 'Working on the Moon'). In actual fact, this space can also be considered a blend, containing information about the Moon and about working in a restaurant as a chef. Input Space 2 has information about the schizophrenic patient's 'reality', which also incorporates his encyclopaedic knowledge about the world (cf. Section 2.2.1). This space contains mental structures, for example, about restaurants and chefs. In this input working on the Earth's satellite is not (yet) possible (hence the minus sign in parentheses after 'Working on the Moon').<sup>105</sup> In the

<sup>105</sup> Although Apollo 11 allegedly landed on the Moon in 1969, there are people who doubt that man has ever been to that satellite. Whichever belief the (schizophrenic) comprehender endorses, it might not influence the

representation process, the schizophrenic patient's Reality Space may serve as the source for the construction of Input Space 1, since the composition of the Chef on the Moon Space may largely depend on encyclopaedic knowledge, for example, about restaurants, chefs, working conditions or customers. Thus, content from Input Space 2 is projected to Input Space 1, as is indicated by the leftward arrows in Figure 18.

The Generic Space contains abstract material from the inputs. These categories refer to location, workplace, job and possibility.<sup>106</sup>

The Blend is made up of contradictory information which is projected from the inputs: the content that working on the Moon is only fictional and the information that Judy is a chef (in a restaurant) on that satellite are co-present. The incongruity in the Blend may cause difficulty in the representation. Therefore, schizophrenic patients may not decipher the implication that the enunciator is trying to be funny.

The idea that low-IQ schizophrenic subjects do make use of blending in their representation of examples in which the maxim of quality is infringed is supported by Varga's observation that those patients were able to decide whether the maxim of quality was violated or not. That is, they observed incongruity in the representation, which is presumed to have been the result of their concurrent processing/activation of conflicting knowledge structures. However, as is indicated in Figure 18, they were unable to deduce the speaker's desired implication.

From Varga's experiment it might be assumed that for schizophrenic patients with a lower IQ, conceptual integration (blending) does play a role in understanding examples where the quality of maxim is infringed. Since traditionally irony has been seen as a violation of the maxim of quality,<sup>107</sup> it might be presumed that the representation of many examples of irony in lower-IQ schizophrenic subjects also incorporates blending.<sup>108</sup> However, further research is needed to verify this presumption.

---

representation to a considerable degree, since working on the Moon may still be considered futuristic by most people.

<sup>106</sup> Under an alternative explanation of the chef example, the comprehender's Reality Space embeds an Ask Space, in which David asks Judy where she works. This mental construction embeds another space, in which Judy works as a chef on the Moon. Thus, this example incorporates double-embedding. The explanation which is schematically represented in Figure 18 was chosen for purposes of simplicity.

<sup>107</sup> See the discussion on irony and the Standard Pragmatic Model in Chapter 6.

<sup>108</sup> Note that although the Traditional Pragmatic Model considers (verbal) irony a phenomenon where the maxim of quality is infringed, some examples (e.g., "*I love children who keep their rooms clean*") do not show such violation (for more details, see Chapter 6). Therefore, the presumption that (the assumed presence of) conceptual integration in the processing of Varga's maxim-infringement experimental items would necessarily presuppose blending in *all* examples of (verbal) irony should be treated with caution.

### 9.6.2 A Neurolinguistic Approach to Understanding Metaphor in Schizophrenia

Another kind of mode of thought impairment which is found in clinical patients with schizophrenia is difficulty with recognising appropriate metaphorical phenomena. Some researchers (e.g., Langdon and Coltheart 2004) attribute this shortcoming to ‘abnormal semantics’ in these individuals. Langdon and Coltheart (2004) refer to evidence of semantic deficit in schizophrenia (Goldberg et al. 1998; Goldberg and Weinberger 2000; Laws et al. 1999), and speculate that the failure to appreciate metaphorical speech in that mental disorder is in connection with the patient’s inability to activate semantic attributes of the source (domain) in order to find a contextually relevant meaning. In understanding “*My lawyer is a shark*”, for example, a schizophrenic cogniser needs to activate ‘predator’ features of the concept SHARK. The failure to comprehend this metaphor in schizophrenia might be caused by the inability to activate/project the necessary *semantic* attributes of PREDATOR. This could also be explained in terms of conceptual blending. Consider Figure 19 below:

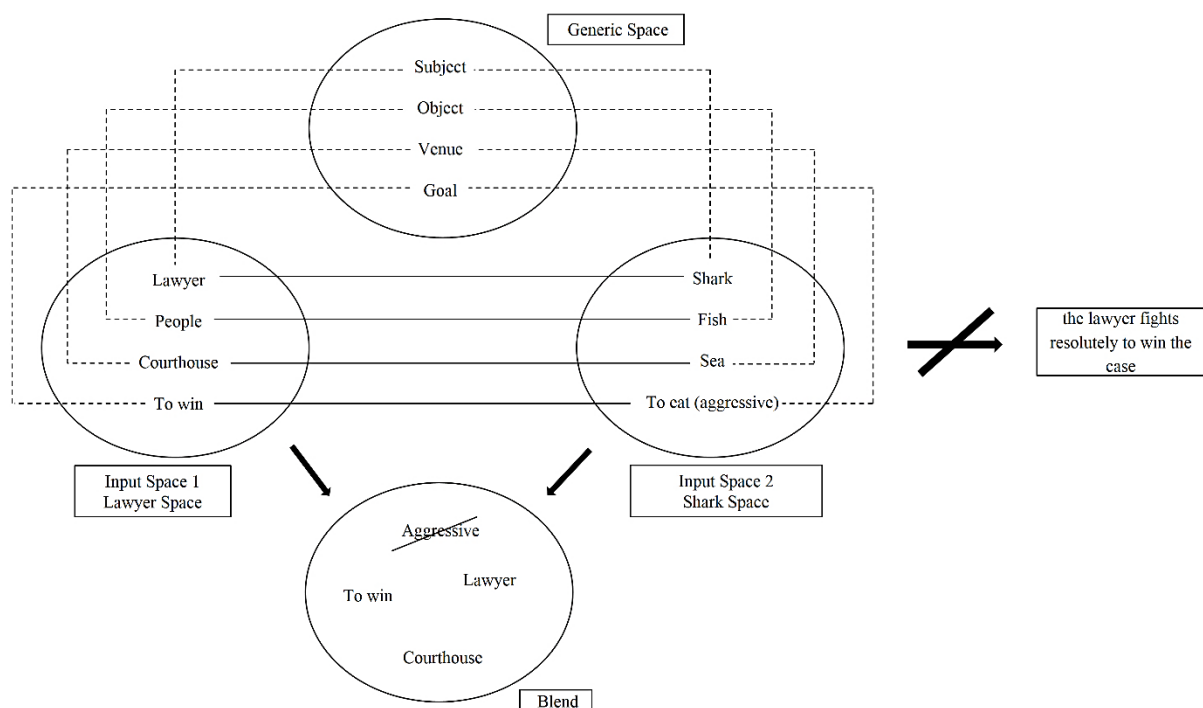


Figure 19. A schematic diagram of the mental space structure of “*My lawyer is a shark*” in schizophrenia

The mental space structure of the lawyer example consists of four spaces. Input Space 1 contains information about lawyers: they mostly though not exclusively work in courthouses, represent people in legal cases, which they are usually eager to win. Input Space 2 incorporates mental content about sharks: they live in seas, eat fish, which they generally hunt in an



aggressive/predatory/persistent manner. The Generic Space contains abstractions of input entries. These are ‘subject’, ‘object’, ‘venue’ and ‘goal’.

Before dealing with the Blend and its outcome, let us recapitulate what Laws et al. (1999) observe about ‘semantic access’ in schizophrenic patients. They argue that retrieving word meaning “requires accessing the corresponding information stored separately in the semantic system” (1999: 100). In their view, although the “knowledge base” in subjects suffering from schizophrenia is “intact” in the sense that it contains all the prototypical information about concepts, those patients have difficulty accessing it (see also Goldberg and Weinberger 2000). This is in accord with the view held by Langdon and Coltheart (2004) that without accessing the necessary attributes of the source and target, schizophrenic patients cannot interpret metaphor as metaphor.<sup>109</sup>

Considering Laws et al.’s and Langdon and Coltheart’s observations, the Blend in Figure 19 might be seen as a mental composition which contains information from the inputs. Although both the Lawyer Space and the Shark Space are intact, Input Space 2 might not project the necessary predator attributes to the Blend, since the retrieval of those features might be compromised in the Shark Space. Therefore, the metaphor cannot run its full course and remains a blend. This results in thought disorder and means that on hearing the lawyer example, a schizophrenic subject may not arrive at the implication that the lawyer fights resolutely to win his case.

As is explained in this section, schizophrenic patients may experience blending in their understanding of metaphor.<sup>110</sup> However, their semantic processing might be “aberrant” in the sense that the accessibility/projection of particular attributes (from the inputs to the Blend) is problematic, which might contribute to difficulties in representation.

---

<sup>109</sup> This might also be true of healthy individuals. However, the reason for their inability to trace the required semantic features might be other than (the schizophrenic type of) ‘semantic deficit’. Age, for example, could be a determining factor. ‘Normal’/healthy children below a certain age may have difficulty understanding “what it means to call a person a hard rock because they do not have the ability to perceive the kinds of nonperceptual similarities between physical hardness and lack of emotional warmth” (Winner and Gardner 1993: 433). Another reason for not understanding metaphor could be (lack of) experience. Not enough/appropriate knowledge about source and target concepts may hinder/prevent metaphorisation from running its full course.

<sup>110</sup> This view contrasts with what Brandt and Brandt (2005) suggest about the understanding of metaphor in schizophrenic cognisers. As they assert, when subjects suffering from schizophrenia process metaphor, blending is absent because metaphor is not recognized as metaphor. However, the discussion in this section disputes this claim. It appears that schizophrenic patients may have/use blends – albeit incomplete ones – in their processing of metaphor.

### 9.7 Summary of the Chapter and Conclusions

This chapter has demonstrated that the semantic notion of ‘conceptual integration’ can help to place the study of schizophrenic irony and metaphor in a neurolinguistic context. On a possibilistic basis it has been shown that blending might be related to a number of predictions proposed in neurological and psychological discussions of both metaphor and irony. The complexity of blends in those examples has an effect on N400: the more complex a blend is, the larger the N400 values tend to be, indicating representation processes that are cognitively more taxing.

Psychological discussions often presume that irony is more difficult to understand than metaphor. A comparison of the general semantic architecture of metaphor and irony is compatible with this claim.

This chapter’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), this chapter shows 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. In these patients, however, the blend seems to ‘get stuck’ at the level of conceptual integration, since there might be no effective means at hand to help them resolve the incongruity. This impairs these subjects’ ToM capabilities, and 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. This may indicate that metaphor and irony work on the basis of different assumptions in schizophrenia and perhaps across the board: while the representation of irony strongly depends on the cogniser’s ToM capabilities, the failure to understand metaphor is more the result of semantic deficit in the comprehender.

The chapter has 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 might be useful in finding new methods in the diagnosis and therapy of schizophrenia. This would be a fruitful area of future investigation.

## CHAPTER 10

### FURTHER IMPLICATIONS, SUMMARY AND CONCLUSIONS

#### 10.1 Further Implications

Although irony and humour can be related (see Section 6.7.1 for references discussing this relation in more detail), the connection between them is not always straightforward (or automatic), as indicated by the meanings of the weather, ankle and the murderer ironies. Further, a distinction between irony and humour can occasionally be seen at the conceptual level of organisation. In support of this assertion, this section compares the ironies discussed in this dissertation and a particular joke in terms of difference in their cognitive mechanisms.

In order to show the manner in which Blending Theory (Fauconnier and Turner 1994, 1998, 2002) contributes to making a distinction between the ironies analysed in this study and a particular joke, consider the example already discussed in Section 6.7.1:

(50) “*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 Blending Theory explanation of the above joke presupposes the following cognitive mechanisms: the first part of this piece of humour evokes the Doctor Space, in which a patient presents himself at a doctor’s residence (assuming that the doctor’s surgery is located in his home) to be treated for some disease. In a bronchial whisper, which can be a symptom of a medical disorder, he enquires whether the doctor is at home. The doctor’s wife (who happens to be young and pretty) answers (in a whisper) that her husband is not there. The logic of the situation presupposes that the wife would direct the patient elsewhere, tell him to come back later (when the doctor is at home), or make some similar response. In spite of this, the wife invites the patient to come in. The invitation conflicts with the expectations of the Doctor Space, since, again, it is against our common sense (folk theory) that in a situation such as this, a patient is asked to enter the house. For the representation of the conceptual integration network of the doctor joke, consider Figure 20:

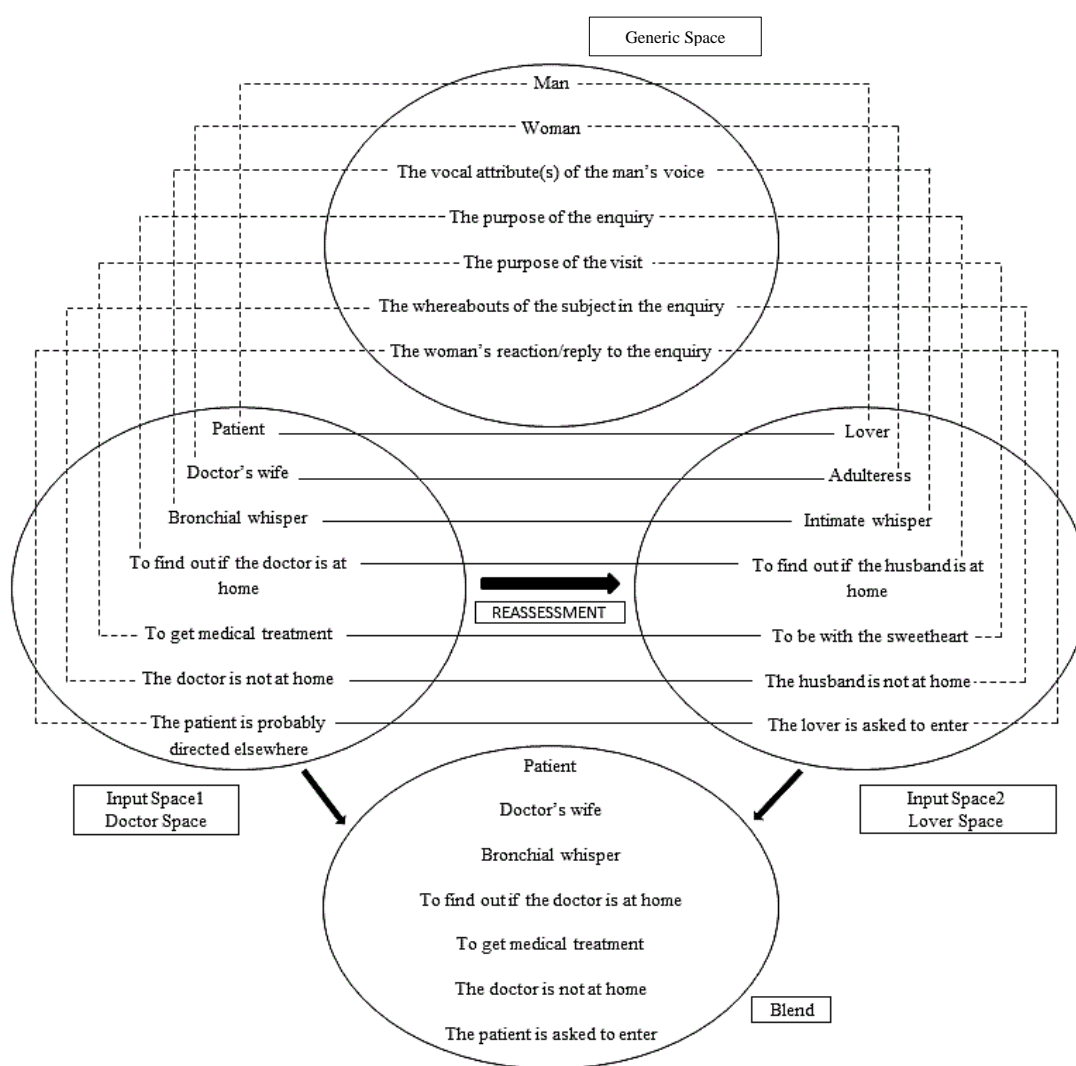


Figure 20. A schematic diagram of the mental space structure of the doctor joke

As is indicated in Figure 20, 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.<sup>111</sup> 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

<sup>111</sup> In her discussion of medical/non-medical whispers, Giora (1991: 473) claims that the lover whispers in a (non-medical) "concealed low voice" in this joke.

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 20, 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.<sup>112</sup> Reassessment, which is indicated by the rightward arrow in Figure 6, is crucial and will gradually put the Lover Space in the focus of the comprehender's attention.

The above analysis explains the comprehension of a type of joke (that involves re-analysis processes) in the context of conceptual integration. For the blending comparison of the ironic examples discussed in this dissertation and the doctor's wife joke, let us now briefly evoke, in general terms, how this paper has treated the three ironies in terms of mental spaces and blends.

As is explicated in Sections 7.4.1, 7.4.2 and 7.4.3, the representation of the weather, ankle and the murderer ironies involves 1) two input mental spaces, a blend and a generic space, 2) counterpart mapping between the inputs, and 3) selective projection from the input spaces to the blends. Conflicting information in the blended constructions induces the figurative meaning.

The comparison of the ironic examples analysed in this study and the doctor joke in terms of their inherent cognitive mechanisms reveals the following distinctions: in the three ironies it is the conflicting blend that gives rise to an ironic implication. In the joke, however, the incongruous blend is only a trigger to a process in which the Doctor Space is re-analysed in terms of the correspondences found between it and the Lover Space. In other words, in the ironies, selective projection (of incongruous elements from the inputs) produces a conflicting blend, and the emergent meaning is the result of that incongruity. In the joke, however, the humorous effect emerges in the process of finding correspondences in the inputs and, most importantly, in the re-analysis of the Doctor Space in terms of those links.

The above distinction makes falsifiable claims about particular examples of irony and a joke. Considering those assertions on a more general level, the following observation could be made: Blending Theory is capable of distinguishing the reanalysis type of joke<sup>113</sup> from non-reassessment examples of irony. Furthermore, the blend-based examination of the doctor joke

<sup>112</sup> 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').

<sup>113</sup> See Hofstadter and Gabora (1989) who suggest that many jokes share common structures ('abstract skeletons'). The reanalysis type (of jokes) could also be considered one such abstraction.

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.

## 10.2 Summary and Conclusions

The dissertation has the following goals: 1) to propose novel, blend-based (Fauconnier and Turner 1994, 1998, 2002) processing frameworks for a better understanding of how metaphor and irony work at the cognitive level of organisation, 2) to systematically compare and contrast these models of representation, and 3) to relate the proposed metaphorical and ironic explanatory frameworks to empirical findings on metaphor and irony from neurology, psychology and psycholinguistics.

The dissertation provided a general outline of Conceptual Metaphor Theory (Lakoff and Johnson 1980) and Blending Theory (Fauconnier and Turner 1994, 1998, 2002), and reviewed the literature on the most significant complementary models of metaphor. As the descriptions show, some of those theories do not adequately explain particular examples, and none make *explicit* claims about how metaphor is actually processed. Therefore, Chapter 5 proposes a blend-based hybrid model of metaphor which incorporates elements from both the Lakoffian model of metaphor (Lakoff and Johnson 1980), and Blending Theory (Fauconnier and Turner 1994, 1998, 2002). Under this view, which essentially constitutes the working definition of metaphor, metaphor is a mode of thought in which there is always an initial blending stage, which amounts essentially to collecting and marshalling information in order for projection to take place from one domain of experience to another. In case compatible structure is found in the input domains, cross-domain mapping occurs. 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.

In order to test how this complementary model works, two empirical researches were conducted. The primary aim of the studies was to test if the examples which the dissertation regarded as metaphorical were understood figuratively by ordinary language users. In Experiment 1, participants were instructed to paraphrase expressions which were presented to them in a conversational setting. In Experiment 2, subjects were asked to write stories using the expressions. In both studies the dissertation made inferences from the answers that the participants provided as to the way(s) the items might have been processed.

The results showed that most examples in the experiments were taken in the figurative sense by most participants. The dissertation considers linguistic items metaphors if they meet

the criteria of the working definition (of metaphor). An essential assumption is that the algorithm which is associated with the working definition generates figurative meaning. Later in the chapter the dissertation demonstrated how the hybrid model of metaphor works using some examples which were considered metaphorical in both experiments.

To construct a model of irony which has not been documented in the literature the dissertation considers Blending Theory (Fauconnier and Turner 1994, 1998, 2002) as the basic theoretical framework. The dissertation argues that irony appears in so many different forms and manifestations that it cannot be defined in a single, well-established scholarly definition. In spite of this, however, the dissertation considers Wittgenstein's (1953) theory of 'family resemblances' and sees examples of irony as members of a group which are related by particular similarity markers, and provides 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.

In order to test if the proposed model of irony works, an empirical research (Experiment 3) was conducted. In it examples which ordinary language users found ironic were collected. Participants were asked 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. 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 Experiment 3.

The dissertation proposes novel representational models of both metaphor and irony, and shows a new orientation in their research – one which is not theory-driven or definition-centred but which is analytic in nature. The blend-based frameworks which the dissertation proposes to explain the representations of the two modes of thought 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: 1) while the representation of metaphor (repM) is concerned with domains, the representation of irony (repI) incorporates mental spaces – two different cognitive architectures, 2) repM originally involves two input mental constructions (source and target domains) in the blending phase, repI allows more than two (mental spaces),



3) only repM incorporates projection from one input to the other, 4) 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, and 5) both repM and repI incorporate conceptual integration.

As the systematic comparison of the blend-based processing models of metaphor and irony indicates, although both metaphor and irony involve conceptual integration, those modes of thought are understood in fundamentally different ways. Therefore, in line with a number of conceptions which differentiate metaphor and irony in terms of their representation (see the introduction in Chapter 1 for discussion and references), the dissertation also vindicates the claim that metaphor and irony are *not* understood by identical processing mechanisms.

The dissertation demonstrates that the semantic notion of ‘conceptual integration’ and especially treating (and analysing) metaphor and irony as modes of thought can help to place the study of schizophrenic irony and metaphor in a neurolinguistic context. On a possibilistic basis it has been shown that blending might be related to a number of predictions proposed in neurological and psychological discussions of both metaphor and irony. The complexity of blends in those examples has an effect on N400: the more complex a blend is, the larger the N400 values tend to be, indicating representation processes that are cognitively more taxing.

Psychological discussions often presume that irony is more difficult to understand than metaphor. A comparison of the general semantic architecture of metaphor and irony is compatible with this claim.

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 shows 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. In these patients, however, the blend seems to ‘get stuck’ at the level of conceptual integration, since there might be no effective means at hand to help them resolve the incongruity. This impairs these subjects’ ToM capabilities, and 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. This may indicate that metaphor and irony work under different

assumptions in schizophrenia and perhaps across the board: while the representation of irony strongly depends on the cogniser's ToM capabilities, the failure to understand metaphor is more the result of semantic deficit in the comprehender.

The dissertation has 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. In addition, the study of conceptual integration in schizophrenics during their representation of metaphor and irony might be useful in finding new methods in the diagnosis and therapy of schizophrenia. This would be a fruitful area of future investigation.

Finally, 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 a 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.

## REFERENCES

- Allwood, J. (2003). Meaning potentials and context: Some consequences for the analysis of variation in meaning. In: H. Cuyckens, R. Dirven & J. Taylor (Eds.), *Cognitive Approaches to Lexical Semantics* (pp. 29–66). Berlin/New York: Mouton de Gruyter.
- Arseneault, M. (2006). Metaphor: Philosophical theories. In: K. Brown (Ed.), *Encyclopedia of Language & Linguistics* (2<sup>nd</sup> Edition) (pp. 40–43). Boston: Elsevier.
- Arzouan, Y., Goldstein, A., & Faust, M. (2007). Brainwaves are stethoscopes: ERP correlates of novel metaphor comprehension. *Brain Research*, 1160, 69–81.
- Asuka, T., & Goldstone, R. (2012). An experimental examination of emergent features in metaphor interpretation using semantic priming effects. In: Proceedings of the Thirty-Fourth Annual Conference of the Cognitive Science Society (pp. 2399–2404). Sapporo, Japan: Cognitive Science Society.
- Attardo, S. (1997). The semantic foundations of cognitive theories of humor. *Humor: International Journal of Humor Research*, 10, 395–420.
- Attardo, S. (2000a). Irony as relevant inappropriateness. *Journal of Pragmatics*, 32, 793–826.
- Attardo, S. (2000b). Irony markers and functions: Towards a goal-oriented theory of irony and its processing. *Rusk*, 12, 3–20.
- Attardo, S. (2002). Humor and irony in interaction: from mode adoption to failure of detection. In: L. Anolli, R. Ciceri & G. Riva (Eds.), *Say Not to Say: New Perspectives on Miscommunication* (pp. 159–179). Amsterdam: IOS Press.
- Attardo, S. (2009). Irony. In: J. L. Mey (Ed.), *Concise Encyclopedia of Pragmatics* (pp. 405–407). Oxford: Elsevier.
- Attardo, S., & Raskin, V. (1991). Script theory revis(it)ed: Joke similarity and joke representation model. *Humor: International Journal of Humor Research*, 4, 293–347.
- Attardo, S., Eisterhold, J., Hay, J., & Poggi, I. (2003). Multimodal markers of irony and sarcasm. *Humor: International Journal of Humor Research*, 16, 243–260.
- Austin, J. (1962). *How to do Things with Words*. Oxford: Clarendon Press.
- Bache, C. (2005). Constraining conceptual integration theory: Levels of blending and disintegration. *Journal of Pragmatics*, 37, 1615–1635.
- Beck, B. (1978). The metaphor as a mediator between semantic and analogic modes of thought. *Current Anthropology*, 19, 83–94.
- Barbe, K. (1995). *Irony in Context*. Amsterdam: John Benjamins.

- Baron-Cohen, S. (2000). Theory of mind in autism: A fifteen-year overview. In: S. Baron-Cohen, H. Tager-Flusberg & D. Cohen (Eds.), *Understanding Other Minds: Perspectives from Developmental Cognitive Neuroscience* (2<sup>nd</sup> Edition) (pp. 3–20). Oxford: Oxford University Press.
- Barsalou, L. (1999). Perceptual symbol systems. *Behavioral and Brain Sciences*, 22, 577–609.
- Becker, A. (1997). Emergent and common features influence metaphor interpretation. *Metaphor and Symbol*, 12, 243–259.
- Beckson, K., & Ganz, A. (1989). *Literary Terms: A Dictionary* (3<sup>rd</sup> Edition). New York: Noonday Press.
- Blasko, D., & Connine, C. (1993). Effects of familiarity and aptness on metaphor processing. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 19, 295–308.
- Bohrn, I., Altmann, U., & Jacobs, A. (2012). Looking at the brains behind figurative language—A quantitative meta-analysis of neuroimaging studies on metaphor, idiom, and irony processing. *Neuropsychologia*, 50, 2669–2683.
- Booth, W. (1983). The empire of irony. *The Georgia Review*, 37, 719–737.
- Bottini, G., Corcoran, R., Sterzi, R., Paulesu, E., Schenone, P., Scarpa, P., ... 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.
- Bowdle, B. (1998). Alignment and abstraction in metaphor. In: K. Holyoak, D. Gentner, & B. Kokinov (Eds.), *Advances in Analogy Research: Integration of Theory and Data from the Cognitive, Computational, and Neural Sciences* (pp. 300–307). Sofia, Bulgaria: New Bulgarian University.
- Bowdle, B., & Gentner, D. (1995). *The career of metaphor*. Paper presented at the meeting of the Psychonomics Society, Los Angeles, CA.
- Bowdle, B., & Gentner, D. (1999). Metaphor comprehension: From comparison to categorization. *Proceedings of the Twenty-First Annual Conference of the Cognitive Science Society* (pp. 90–95). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Bowdle, B., & Gentner, D. (2005). The career of metaphor. *Psychological Review*, 112, 193–216.
- Brandt, L. (2003). *Humor and meaning construction in everyday speech: A mental space analysis*. Paper presented at the 8<sup>th</sup> International Cognitive Linguistics Conference, University of La Rioja, Spain.
- Brandt, L. (2013). *The Communicative Mind: A Linguistic Exploration of Conceptual Integration and Meaning Construction*. Newcastle upon Tyne, UK: Cambridge Scholars Publishing.

- Brandt, L., & Brandt, P. (2005). Making sense of a blend: A cognitive-semiotic approach to metaphor. *Annual Review of Cognitive Linguistics*, 3, 206–249.
- Brisard, F. (1999). *A critique of localism in and about tense theory* (Doctoral dissertation). University of Antwerp.
- Brown, R. (1980). The pragmatics of verbal irony. In: R. Shuy & A. Shnukal (Eds.), *Language Use and the Uses of Language* (pp. 111–127). Washington, DC: Georgetown University Press.
- Brownell, H. (1988). Appreciation of metaphoric and connotative word meaning by brain-damaged patients. In: C. Chiarello (Ed.), *Right Hemisphere Contributions to Lexical Semantics* (pp. 19–31). Heidelberg: Springer-Verlag.
- Brownell, H. (2000). Right hemisphere contributions to understanding lexical connotation and metaphor. In: Y. Grodzinsky, L. Shapiro & D. Swinney (Eds.), *Language and the Brain* (pp. 185–201). San Diego: Academic Press.
- 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.
- Brugman, C. (1990). What is the invariance hypothesis? *Cognitive Linguistics*, 1, 257–266.
- Brumark, A. (2006). Non-observance of Gricean maxims in family dinner table conversation. *Journal of Pragmatics*, 38, 1206–1238.
- Burgess, C., & Simpson, G. (1988). Cerebral hemispheric mechanism in the retrieval of ambiguous word meanings. *Brain & Language*, 33, 86–102.
- Bryant, G., & Fox Tree, J. (2005). Is there an ironic tone of voice? *Language and Speech*, 48, 257–277.
- Cacciari, C. (1998). Why do we speak metaphorically? Reflections in thought and language. In: A. Katz, C. Cacciari, R. Gibbs & M. Turner (Eds.), *Figurative Language and Thought* (pp. 119–157). New York: Oxford University Press.
- Camp, E. (2006). Metaphor in the mind: The cognition of metaphor. *Philosophy Compass*, 1, 154–170.
- Carbonell, J. (1980). Metaphor – a key to extensible semantic analysis. Proceedings of the 18th Annual Meeting of the Association for Computational Linguistics. Pennsylvania: Association for Computational Linguistics.
- Carnap, R. (1956). *Meaning and Necessity* (2<sup>nd</sup> Edition). Chicago: University of Chicago Press.
- Carston, R. (2002). *Thoughts and Utterances: The Pragmatics of Explicit Communication*. Oxford: Blackwell.

- Casasanto, D. (2005). *Perceptual foundations of abstract thought* (Doctoral dissertation, Massachusetts Institute of Technology). Retrieved from [http://www.casasanto.com/papers/Casasanto\\_Thesis\\_2005.pdf](http://www.casasanto.com/papers/Casasanto_Thesis_2005.pdf)
- Channon, S., Pellieff, A., & Rule, A. (2005). Social cognition after head injury: Sarcasm and theory of mind. *Brain & Language*, 93, 123–134.
- Cheang, H., & Pell, M. (2008). The sound of sarcasm. *Speech Communication*, 50, 366–381.
- Chilton, P. (1996). *Security Metaphors*. New York: Peter Lang.
- Clark, H. (1996). *Using Language*. New York: Cambridge University Press.
- Clark, H., & Chase, W. (1972). On the process of comparing sentences against pictures. *Cognitive Psychology*, 3, 472–517.
- Clark, H., & Gerrig, R. (1984). On the pretense theory of irony. *Journal of Experimental Psychology: General*, 113, 121–126.
- Clift, R. (1999). Irony in conversation. *Language in Society*, 28, 523–553.
- Colston, H. (2000). On necessary conditions for verbal irony comprehension. *Pragmatics & Cognition*, 8, 277–324.
- Colston, H., & Gibbs, R. (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 University Press.
- Coulson, S. (2005a). Sarcasm and the space structuring model. In: S. Coulson & B. Lewandowska-Tomaszczyk (Eds.), *The Literal and Nonliteral in Language and Thought* (pp. 129–144). Berlin: Peter Lang.
- Coulson, S. (2005b). The Literal/Nonliteral Distinction. In: S. Coulson & B. Lewandowska-Tomaszczyk (Eds.), *The Literal and Nonliteral in Language and Thought* (pp. 9–22). Berlin: Peter Lang.
- Coulson, S. (2006a). Conceptual blending in thought, rhetoric, and ideology. In: G. Kristiansen, M. Achard, R. Dirven & F. R. de Mendoza Ibáñez (Eds.), *Cognitive Linguistics: Current Applications and Future Perspectives* (pp. 187–210). Berlin: Walter de Gruyter.
- Coulson, S. (2006b). Constructing meaning. *Metaphor and Symbol*, 21, 245–266.
- Coulson, S. (2006c). Metaphor and Conceptual Blending. In: K. Brown (Editor-in-Chief), *Encyclopedia of Language and Linguistics* (2<sup>nd</sup> Edition) (pp. 32–39). Oxford: Elsevier.
- Coulson, S., & Matlock, T. (2001). Metaphor and the space structuring model. *Metaphor and Symbol*, 16, 295–316.
- Coulson, S., & Oakley, T. (2000). Blending basics. *Cognitive Linguistics*, 11, 175–196.

- Coulson, S. & Oakley, T. (2003). Metonymy and conceptual blending. In: K.-U. Panther & L. Thornburg (Eds.), *Metonymy and Pragmatic Inferencing* (pp. 51–79). Amsterdam: John Benjamins.
- 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 & Cognition*, 30, 958–968.
- Cornejo, C., Simonetti, F., Aldunate, N., Ibanez, A., Lopez, V., & Melloni, L. (2007). Electrophysiological evidence of different interpretative strategies in irony comprehension. *Journal of Psycholinguistic Research*, 36, 411–430.
- Creusere, M. (2000). A developmental test of theoretical perspectives on the understanding of verbal irony: Children's recognition of allusion and pragmatic insincerity. *Metaphor and Symbol*, 15, 29–45.
- Croft, W. (2009). Towards a social cognitive linguistics. In: V. Evans & S. Poursel (Eds.), *New Directions in Cognitive Linguistics* (395–420). Amsterdam: John Benjamins.
- Crosthwaite, J. (1985). The meaning of metaphors. *Australasian Journal of Philosophy*, 63, 320–335.
- Curcó, C. (2000). Irony: Negation, echo and metarepresentation. *Lingua*, 110, 257–280.
- Cutler, A. (1974). On saying what you mean without meaning what you say. In: M. Lagaly, R. Fox & A. Bruck (Eds.), *Papers from the tenth regional meeting of the Chicago Linguistics Society* (pp. 117–127). Chicago: University of Chicago Press.
- Cutrer, M. (1994). *Time and tense in narratives and everyday language* (Doctoral dissertation). University of California, San Diego.
- Dane, J. (2011). *The Critical Mythology of Irony*. Athens, GA: The University of Georgia Press.
- Danesi, M. (2004). *Messages, Signs, and Meanings: A Basic Textbook in Semiotics and Communication Theory*. Toronto: Canadian Scholars' Press.
- Davidson, D. (1978). What metaphors mean. In: S. Sacks (Ed.), *On Metaphor* (pp. 29–46). Chicago: University of Chicago Press.
- Davies, P. (1995). *About Time: Einstein's Unfinished Revolution*. New York: Simon and Schuster.
- Deignan, A. (2005). *Metaphor and Corpus Linguistics*. Amsterdam: John Benjamins.
- Deignan, A. (2006). The grammar of linguistic metaphors. In: A. Stefanowitsch & S. Gries (Eds.), *Corpus-Based Approaches to Metaphor and Metonymy* (pp. 106–122). New York: Mouton de Gruyter.

- Dews, S., & Winner, E. (1997). Attributing meaning to deliberately false utterances: The case of irony. In: C. Mandell & A. McCabe (Eds.), *The Problem of Meaning: Behavioral and Cognitive Perspectives* (pp. 377–414). Amsterdam: Elsevier.
- Dews, S., & Winner, E. (1999). Obligatory processing of the literal and nonliteral meanings of ironic utterances. *Journal of Pragmatics*, 31, 1579–1599.
- Dews, S., Kaplan, J., & Winner, E. (1995). Why not say it directly? The social functions of irony. *Discourse Processes*, 19, 347–367.
- Dews, S., Winner, E., Kaplan, J., Rosenblatt, E., Hunt, M., Lim, K., ... Smarsh, B. (1996). Children's understanding of the meaning and functions of verbal irony. *Child Development*, 67, 3071–3085.
- Ericsson, E., Olofsson, J., Nordin, S., Rudolfsson, T., & Sandstrom, G. (2008). Is the P600/SPS affected by the richness of semantic content? A linguistic ERP study in Swedish. *Scandinavian Journal of Psychology*, 49, 1–9.
- Evans, V. (2004). *The Structure of Time: Language, Meaning and Temporal Cognition*. Amsterdam: John Benjamins.
- 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, 2348–2359.
- Falkenhainer, B., Forbus, K., & Gentner, D. (1989). The structure-mapping engine: Algorithm and examples. *Artificial Intelligence*, 41, 1–63.
- Farrell, F. (1987). Metaphor and Davidsonian theories of meaning. *Canadian Journal of Philosophy*, 17, 625–642.
- Fass, D. (1991). Met\*: A method for discriminating metonymy and metaphor by computer. *Computational Linguistics*, 17, 49–90.
- Fauconnier, G. ([1985] 1994). *Mental Spaces*. Cambridge: Cambridge University Press.
- Fauconnier, G. (1997). *Mappings in Thought and Language*. Cambridge: Cambridge University Press.
- Fauconnier, G., & Lakoff, G. (2009). On metaphor and blending. *Cognitive Semiotics*, 5, 393–399.
- Fauconnier, G., & Turner, M. (1994). *Conceptual projection and middle spaces*. Department of Cognitive Science, University of California, San Diego. Technical Report No. 9401. (available at: [www.cogsci.ucsd.edu/research/files/technical/9401.pdf](http://www.cogsci.ucsd.edu/research/files/technical/9401.pdf)).
- Fauconnier, G., & Turner, M. (1998). Conceptual integration networks. *Cognitive Science*, 22, 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: R. Gibbs (Ed.), *The Cambridge Handbook of Metaphor and Thought* (pp. 53–66). Cambridge: Cambridge University Press.
- Fillmore, C. (1982). Frame semantics. In: The Linguistic Society of Korea (Ed.), *Linguistics in the Morning Calm* (pp. 111–137). Seoul, South Korea: Hanshin Publishing Company.
- Fillmore, C. (1985). Frames and the semantics of understanding. *Quaderni di Semantica*, 6, 222–254.
- Fogelin, R. (1988). *Figuratively Speaking*. New Haven: Yale University Press.
- Forbus, K., Gentner, D., & Law, K. (1995). MAC/FAC: A model of similarity-based retrieval. *Cognitive Science*, 19, 141–205.
- Forceville, C. (2008). Metaphors in pictures and multimodal representations. In: R. Gibbs (Ed.), *The Cambridge Handbook of Metaphor and Thought* (pp. 462–482). Cambridge: Cambridge University Press.
- Freyd, J. (1983). Shareability: The social psychology of epistemology. *Cognitive Science*, 7, 191–210.
- Friederici, A., Hahne, A., & Saddy, D. (2002). Distinct neurophysiological patterns reflecting aspects of syntactic complexity and syntactic repair. *Journal of Psycholinguistic Research*, 31, 45–63.
- Frith, U., & Frith, C. (2003). Development and neurophysiology of mentalizing. *Philosophical Transactions of the Royal Society: Biological Sciences*, 358, 459–473.
- Gentner, D. & Bowdle, B. (2001). Convention, form, and figurative language processing. *Metaphor and Symbol*, 16, 223–247.
- Gentner, D. & Wolff, P. (1997). Alignment in the processing of metaphor. *Journal of Memory and Language*, 37, 331–355.
- Gentner, D. (1983). Structure-mapping: A theoretical framework for analogy. *Cognitive Science*, 7, 155–170.
- Gentner, D. (1989). The mechanisms of analogical learning. In: S. Vosniadou & A. Ortony (Eds.), *Similarity and Analogical Reasoning* (pp. 199–241). London: Cambridge University Press.
- Gentner, D., & Bowdle, B. (2001). Convention, form, and figurative language processing. *Metaphor and Symbol*, 16, 223–247.

- Gentner, D., & Clement, C. (1988). Evidence for relational selectivity in the interpretation of analogy and metaphor. In: G. Bowler (Ed.), *The Psychology of Learning and Motivation: Advances in Research and Theory* (Vol. 22) (pp. 307–358). New York: Academic Press.
- Gentner, D., & Wolff, P. (1997). Alignment in the processing of metaphor. *Journal of Memory and Language*, 37, 331–355.
- Gentner, D., Bowdle, B., Wolff, P., & Boronat, C. (2001). Metaphor is like analogy. In: D. Gentner, K. Holyoak & B. Kokinov (Eds.), *The Analogical Mind: Perspectives from Cognitive Science* (pp. 199–253). Cambridge, MA: MIT Press.
- Gerrig, R. (1989). Empirical constraints on computational theories of metaphor: Comments on Indurkha. *Cognitive Science*, 13, 235–241.
- Gernsbacher, M., 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. (1980). Spilling the bean on understanding and memory for idioms in conversation. *Memory & Cognition*, 8, 449–456.
- Gibbs, R. (1982). A critical examination of the contribution of literal meaning to understanding nonliteral discourse. *Text & Talk*, 2, 9–27.
- Gibbs, R. (1986). On the psycholinguistics of sarcasm. *Journal of Experimental Psychology: General*, 115, 3–15.
- Gibbs, R. (1993). Process and products in making sense of tropes. In: A. Ortony (Ed.), *Metaphor and Thought* (2<sup>nd</sup> Edition) (pp. 252–276). New York: Cambridge University Press.
- Gibbs, R. (1994a). Figurative thought and figurative language. In: M. Gernsbacher (Ed.), *Handbook of Psycholinguistics* (pp. 411–446). San Diego, CA: Academic Press.
- Gibbs, R. (1994b). *The Poetics of Mind: Figurative Thought, Language, and Understanding*. New York: Cambridge University Press.
- Gibbs, R. (1998). The fight over metaphor and thought in language. In: A. Katz, C. Cacciari, R. Gibbs & M. Turner (Eds.), *Figurative Language and Thought* (pp. 88–118). New York: Oxford University Press.
- Gibbs, R. (2000). Making good psychology out of blending theory. *Cognitive Linguistics*, 11, 347–358.
- Gibbs, R. (2001). Evaluating contemporary models of figurative language understanding. *Metaphor and Symbol*, 16, 317–333.

- Gibbs, R. (2002). A new look at literal meaning in understanding what speakers say and implicate. *Journal of Pragmatics*, 34, 457–486.
- Gibbs, R. (2005a). Embodiment and metaphorical imagination. In: D. Pecher & R. Zwaan (Eds.), *Grounding Cognition: The Role of Perception and Action in Memory, Language, and Thinking* (pp. 65–92). New York: Cambridge University Press.
- Gibbs, R. (2005b). Literal and nonliteral meanings are corrupt ideas: A view from psycholinguistics. In: S. Coulson & B. Lewandowska-Tomaszczyk (Eds.), *The Literal and Nonliteral in Language and Thought* (pp. 221–238). Berlin: Peter Lang.
- Gibbs, R., & Colston, H. (2002). The risks and rewards of ironic communication. In: L. Anolli, R. Ciceri & G. Riva (Eds.), *Say Not to Say: New Perspectives in Miscommunication* (pp. 181–194). Amsterdam: IOS Press.
- Gibbs, R., & Colston, H. (2006). Figurative language. In: M. Traxler & M. Gernsbacher (Eds.), *Handbook of Psycholinguistics* (2<sup>nd</sup> Edition) (pp. 835–861). Academic Press.
- Gibbs, R., & Izett, C. (2005). Irony as persuasive communication. In: H. Colston & A. Katz (Eds.), *Figurative Language Comprehension: Social and Cultural Influences* (pp. 131–151). Mahwah, NJ: Erlbaum and Associates.
- Gibbs, R., & O'Brien, J. (1991). Psychological aspects of irony understanding. *Journal of Pragmatics*, 16, 523–530.
- Gibbs, R., O'Brien, J., & Doolittle, S. (1995). Inferring meanings that are not intended: Speakers' intentions and irony comprehension. *Discourse Processes*, 20, 187–203.
- Gildea, P., & Glucksberg, S. (1983). On understanding metaphor: The role of context. *Journal of Verbal Learning and Verbal Behavior*, 22, 577–590.
- Gineste, M.-D., Indurkha, B., & Scart, V. (2000). Emergence of features in metaphor comprehension. *Metaphor and Symbol* 15, 117–136.
- Giora, R. (1991). On the cognitive aspects of the joke. *Journal of Pragmatics*, 16, 465–486.
- Giora, R. (1995). On irony and negation. *Discourse Processes*, 19, 239–264.
- Giora, R. (1997). Understanding figurative and literal language: The graded salience hypothesis. *Cognitive Linguistics*, 8, 183–206.
- Giora, R. (1999). On the priority of salient meanings: Studies of literal and figurative language. *Journal of Pragmatics*, 31, 919–929.
- Giora, R. (2003a). *On Our Mind: Salience, Context, and Figurative Language*. New York: Oxford University Press.
- Giora, R. (2003b). Recent trends in literal vs. figurative language research: The case of irony. *Speech Pathology*. Retrieved from [http://www.speechpathology.com/articles/arc\\_disp.asp?article\\_id=51&catid=491](http://www.speechpathology.com/articles/arc_disp.asp?article_id=51&catid=491)

- Giora, R. (2004). On the Graded Salience Hypothesis. *Intercultural Pragmatics*, 1, 93–103.
- Giora, R. (2008). Is metaphor unique? In: R. Gibbs (Ed.), *The Cambridge Handbook of Metaphor and Thought* (pp. 143–160). Cambridge: Cambridge University Press.
- Giora, R., & Fein, O. (1999). On understanding familiar and less-familiar figurative language. *Journal of Pragmatics*, 31, 1601–1618.
- Giora, R., Fein, O., & Schwartz, T. (1998). Irony: Graded salience and indirect negation. *Metaphor and Symbol*, 13, 83–101.
- Giora, R., Fein, O., Ganzi, J., & Alkeslassy Levi, N. (2005). On negation as mitigation: The case of negative irony. *Discourse Processes*, 39, 81–100.
- Giora, R., Zaidel, E., Soroker, N., Batori, G., & Kashner, A. (2000). Differential effects of right- and left-hemisphere damage on understanding sarcasm and metaphor. *Metaphor and Symbol*, 15, 63–83.
- Glucksberg, S. (1989). Metaphors in conversation: How are they understood? Why are they used? *Metaphor and Symbolic Activity*, 4, 125–143.
- Glucksberg, S. (2003). The psycholinguistics of metaphor. *Trends in Cognitive Sciences*, 7, 92–96.
- Glucksberg, S. (2008). How metaphors create categories - quickly. In: R. Gibbs (Ed.), *The Cambridge Handbook of Metaphor and Thought* (pp. 67–83). Cambridge: Cambridge University Press.
- Glucksberg, S., & Keysar, B. (1993). How Metaphors Work. In: A. Ortony (Ed.), *Metaphor and Thought* (2<sup>nd</sup> Edition) (pp. 401–424). Cambridge: Cambridge University Press.
- Glucksberg, S., Gildea, P., & Bookin, H. (1982). On understanding nonliteral speech: Can people ignore metaphors? *Journal of Verbal Learning and Verbal Behavior*, 21, 85–98.
- Goldberg, T., Aloia, M., Gourovitch, M., Missar, D., Pickar, D., & Weinberger, D. (1998). Cognitive substrates of thought disorder 1: The semantic system. *American Journal of Psychiatry*, 155, 1671–1675.
- Goldberg, T., & Weinberger, D. (2000). Thought disorder in schizophrenia: A reappraisal of older formulations and an overview of some recent studies. *Cognitive Neuropsychiatry*, 5, 1–20.
- Goodman, N. (1968). *Languages of Art: An Approach to a Theory of Symbols*. New York: The Bobbs-Merrill Company.
- Grady, J., Oakley, T., & Coulson, S. (1999). Blending and metaphor. In: R. Gibbs & G. Steen (Eds.), *Metaphor in Cognitive Linguistics* (pp. 101–124). Amsterdam: John Benjamins.

- Graesser, A., Mio, J., & Mills, K. (1989). Metaphors in persuasive communication. In D. Meutsch & R. Viehoff (Eds.), *Comprehension and Literary Discourse* (pp. 131-154). Berlin: De Gruyter.
- Grice, P. (1975). Logic and conversation. In: P. Cole & J. Morgan (Eds.), *Syntax and Semantics: Speech Acts* (Vol. 3) (pp. 41-58). New York: Academic Press.
- Grice, P. (1978). Further notes on logic and conversation. In: P. Cole (Ed.), *Syntax and Semantics: Pragmatics* (Vol. 9) (pp. 113-128). New York: Academic Press.
- 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, 195-225.
- Györi, M., Lukács, Á., & Pléh, Cs. (2004). Towards the understanding of the neurogenesis of social cognition: Evidence from impaired populations. *Journal of Cultural and Evolutionary Psychology*, 2, 261-282.
- Hácová, P. (2004). *The Bridge and the Eclipse: Metaphor in the Poetry of Samuel Taylor Coleridge*. Olomouc: Palacký University Press.
- Haiman, J. (1980). Dictionaries and encyclopedias. *Lingua*, 50, 329-357.
- Haiman, J. (1990). Sarcasm as theater. *Cognitive Linguistics*, 1, 181-205.
- Haiman, J. (1998). *Talk is Cheap: Sarcasm, Alienation, and the Evolution of Language*. Oxford: Oxford University Press.
- Hall, R. (1989). Computational approaches to analogical reasoning: A comparative analysis. *Artificial Intelligence*, 39, 39-120.
- Hamamoto, H. (1998). Irony from a cognitive perspective. In: R. Carston & S. Uchida (Eds.), *Relevance Theory: Applications and Implications* (pp. 257-270). Amsterdam: John Benjamins.
- Happé, F. (1993). Communicative competence and theory of mind in autism: A test of relevance theory. *Cognition*, 48, 101-119.
- Harris, M., & Pexman, P. (2003). Children's perceptions of the social functions of verbal irony. *Discourse Processes*, 36, 147-165.
- Haverkate, H. (1990). A speech act analysis of irony. *Journal of Pragmatics*, 14, 77-109.
- Hobbs, J. (1992). Metaphor and abduction. In: A. Ortony, J. Slack & O. Stock (Eds.), *Communication from an Artificial Intelligence Perspective: Theoretical and Applied Issues* (pp. 35-58). Berlin: Springer-Verlag.
- Hofstadter, D., & Gabora, L. (1989). Synopsis of the workshop on humor and cognition. *Humor*, 2, 417-440.

- Hofstadter, D., & Mitchell, M. (1988). Conceptual slippage and analogy-making: A report on the Copycat project. *Proceedings of the Tenth Annual Conference of the Cognitive Science Society*. Hillsdale, N.J.: Erlbaum.
- Hofstadter, D., & the Fluid Analogy Research Group (1995). *Fluid Concepts & Creative Analogies: Computer Models of the Fundamental Mechanisms of Thought*. New York: Basic Books.
- Hogaboam, T., & Perfetti, C. (1975). Lexical ambiguity and sentence comprehension. *Journal of Verbal Learning and Verbal Behavior*, 14, 265–274.
- Holyoak, K., & Thagard, P. (1989). Analogical mapping by constraint satisfaction. *Cognitive Science*, 13, 295–355.
- Horn, L. (1989). *A Natural History of Negation*. Chicago: University of Chicago Press.
- Iakimova, G., Passerieux, C., Laurent, J., & Hardy-Bayle, M. (2005). ERPs of metaphoric, literal, and incongruous semantic processing in schizophrenia. *Psychophysiology*, 42, 380–390.
- Imaz, M., & Benyon, D. (2007). *Designing with Blends: Conceptual foundations of Human–Computer Interaction and Software Engineering*. Cambridge, MA: MIT Press.
- Indurkha, B. (1987). Approximate semantic transference: A computational theory of metaphor and analogy. *Cognitive Science*, 11, 445–480.
- Ito, A., & Takizawa, O. (1996). Why do people use irony?: The pragmatics of irony usage. *Proceedings of the International Workshop on Computational Humor* (pp. 21–28).
- Ivanko, S., & Pexman, P. (2003). Context incongruity and irony processing. *Discourse Processes*, 35, 241–279.
- Janicki, K. (2006). *Language Misconceived: Arguing for Applied Cognitive Sociolinguistics*. New Jersey: Lawrence Erlbaum Associates.
- Johnson, J. (2009). *Mahler's Voices: Expression and Irony in the Songs and Symphonies*. New York: Oxford University Press.
- Johnson, M. (1981). *Philosophical Perspectives on Metaphor*. Minneapolis: University of Minnesota Press.
- Johnson, M. (1989). Image-schematic bases of meaning. *Semiotic Inquiry*, 9, 109–118.
- Jorgensen, J., Miller, G., & Sperber, D. (1984). Test of the mention theory of irony. *Journal of Experimental Psychology: General*, 113, 112–120.
- Kaan, E., Harris, A., Gibson, E., & Holcomb, P. (2000). The P600 as an index of syntactic integration difficulty. *Language and Cognitive Processes*, 15, 159–201.

- Katz, A. (2005). Discourse and social-cultural factors in understanding nonliteral language. In: H. Colston & A. Katz (Eds.), *Figurative Language Comprehension: Social and Cultural Influences* (pp. 183–207). Mahwah, NJ: Erlbaum and Associates.
- Katz, A., & Ferretti, T. (2001). Moment-by-moment readings of proverbs in literal and nonliteral contexts. *Metaphor and Symbol*, 16, 193–221.
- Katz, A., Blasko, D., & Kamzerski, V. (2004). Saying what you don't mean: Social influences on language processing. *Current Directions in Psychological Science*, 13, 186–189.
- Katz, A., Cacciari, C., Gibbs, R., & Turner, M. (1998). *Figurative Language and Thought*. New York: Oxford University Press.
- Katz, J., & Fodor, J. (1963). The structure of semantic theory. *Language*, 39, 170–210.
- Kaufer, D. (1981). Understanding ironic communication. *Journal of Pragmatics*, 5, 495–510.
- Kazmerski, V., Blasko, D., & Dessalegn, B. (2003). ERP and behavioral evidence of individual differences in metaphor comprehension. *Memory & Cognition*, 31, 673–689.
- Kempton, W. (1987). Two theories of home heat control. In: D. Holland & N. Quinn (Eds.), *Cultural Models in Language and Thought* (pp. 222–242). Cambridge: Cambridge University Press.
- Keysar, B. (1989). On the Functional Equivalence of Literal and Metaphorical Interpretations in Discourse. *Journal of Memory and Language*, 28, 375–385.
- Kierkegaard, S. (1929). *Über den Begriff der Ironie* [On the concept of irony]. München: R. Oldenbourg.
- Kihara, Y. (2005). The mental space structure of verbal irony. *Cognitive Linguistics*, 16, 513–530.
- Kimmel, M. (2005). Culture regained: Situated and compound image schemas. In: B. Hampe (Ed.), *From Perception to Meaning: Image Schemas in Cognitive Linguistics* (pp. 285–311). Berlin: Mouton de Gruyter.
- 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: A simulation based on LSA. In: R. Gibbs (Ed.), *The Cambridge Handbook of Metaphor and Thought* (pp. 129–142). Cambridge: Cambridge University Press.
- Kintsch, W., & Bowles, A. (2002). Metaphor comprehension: What makes a metaphor difficult to understand? *Metaphor and Symbol*, 17, 249–262.
- Kircher, T., Leube, D., Erb, M., Grodd, W., & Rapp, A. (2007). Neural correlates of metaphor processing in schizophrenia. *Neuroimage*, 34, 281–289.

- Kittay, E. (1987). *Metaphor: Its Cognitive Force and Linguistic Structure*. New York: Oxford University Press.
- Knox, N. (1961). *The Word IRONY and Its Context, 1500–1755*. Durham, NC: Duke University Press.
- Knox, N. (1972). On the classification of ironies. *Modern Philology*, 70, 53–62.
- Knox, N. (1973). Irony. In: P. Wiener (Ed.), *Dictionary of the History of Ideas* (Vol. 2) (pp. 627–634). New York: Scribner.
- Kotthoff, H. (2002). Irony, quotation, and other forms of staged intertextuality: Double or contrastive perspectivation in conversation. In: K. Graumann & W. Kallmeyer (Eds.), *Perspective and Perspectivation in Discourse* (pp. 201–233). Amsterdam: John Benjamins.
- Kövecses, Z. (1990). *Emotion Concepts*. New York: Springer.
- Kövecses, Z. (1995). The “container” metaphor of anger in English, Chinese, Japanese and Hungarian. In: Z. Radman (Ed.), *From a Metaphorical Point of View: A Multidisciplinary Approach to the Cognitive Content of Metaphor* (pp. 117–145). Berlin: Mouton de Gruyter.
- Kövecses, Z. (2000). *Metaphor and Emotion: Language, Culture, and Body in Human Feeling*. Cambridge: Cambridge University Press.
- Kövecses, Z. (2002). *Metaphor: A Practical Introduction*. New York: Oxford University Press.
- Kövecses, Z. (2004). *Metaphor and Emotion: Language, Culture, and Body in Human Feeling*. Cambridge: Cambridge University Press.
- Kövecses, Z. (2005). *Metaphor in Culture: Universality and Variation*. Cambridge: Cambridge University Press.
- Kreuz, R. (1996). The use of verbal irony: Cues and constraints. In: J. Mio & A. Katz (Eds.), *Metaphor: Implications and Applications* (pp. 23–38). Mahwah, NJ: Lawrence Erlbaum Associates.
- Kreuz, R. (2000). The production and processing of verbal irony. *Metaphor and Symbol*, 15, 99–107.
- Kreuz, R., & Caucci, G. (2009). Social aspects of verbal irony use. In: H. Pishwa (Ed.), *Language and Social Cognition* (pp. 325–345). Berlin: Mouton de Gruyter.
- Kreuz, R., & Glucksberg, S. (1989). How to be sarcastic: The echoic reminder theory of verbal irony. *Journal of Experimental Psychology: General*, 118, 374–386.
- Kreuz, R., & Link, K. (2002). Asymmetries in the use of verbal irony. *Journal of Language and Social Psychology*, 21, 127–143.



- Kreuz, R., & Roberts, R. (1993). On satire and parody: The importance of being ironic. *Metaphor and Symbolic Activity*, 8, 97–109.
- Kreuz, R., & Roberts, R. (1995). Two cues for verbal irony: Hyperbole and the ironic tone of voice. *Metaphor and Symbolic Activity*, 10, 21–31.
- Kreuz, R., Kassler, M., Coppenrath, L., & McLain Allen, B. (1999). Tag questions and common ground effects in the perception of verbal irony. *Journal of Pragmatics*, 31, 1685–1700.
- Kreuz, R., Long, D., & Church, M. (1991). On being ironic: Pragmatic and mnemonic implications. *Metaphor and Symbolic Activity*, 6, 149–162.
- Kumon-Nakamura, S., Glucksberg, S., & Brown, M. (1995). How about another piece of pie: The allusional pretense theory of discourse irony. *Journal of Experimental Psychology: General*, 124, 3–21.
- Kutas, M., & Federmeier, K. (2000). Electrophysiology reveals semantic memory use in language comprehension. *Trends in Cognitive Sciences*, 4, 463–470.
- Kutas, M., Van Petten, C., & Kluender, R. (2006). Psycholinguistics Electrified II: 1994–2005. In: M. Traxler & M. Gernsbacher (Eds.), *Handbook of Psycholinguistics* (2<sup>nd</sup> Edition) (pp. 659–724). New York: Elsevier Press.
- Lai, V., Curran, T., & Menn, L. (2009). Comprehending conventional and novel metaphors: An ERP study. *Brain Research*, 1284, 145–155.
- Lakoff, G. (1986). The Meanings of Literal. *Metaphor and Symbolic Activity*, 1, 291–296.
- Lakoff, G. (1987). *Women, Fire and Dangerous Things: What Categories Reveal about the Mind*. Chicago: University of Chicago Press.
- Lakoff, G. (1990). The invariance hypothesis: Is abstract reason based on image-schemas? *Cognitive Linguistics*, 1, 39–74.
- Lakoff, G. (1993). The contemporary theory of metaphor. In: A. Ortony (Ed.), *Metaphor and Thought* (2<sup>nd</sup> Edition) (pp. 202–251). Cambridge: Cambridge University Press.
- Lakoff, G. (1996). *Moral Politics*. Chicago: The University of Chicago Press.
- Lakoff, G. (2008). The neural theory of metaphor. In: R. Gibbs (Ed.), *The Cambridge Handbook of Metaphor and Thought* (pp. 17–38). Cambridge: Cambridge University Press.
- Lakoff, G., & Johnson, M. (1980). *Metaphors We Live By*. Chicago: University of Chicago Press.
- Lakoff, G., & Kövecses, Z. (1987). The cognitive model of anger inherent in American English. In: D. Holland & N. Quinn (Eds.), *Cultural Models in Language and Thought* (pp. 195–221). Cambridge: Cambridge University Press.

- Lakoff, G., & Turner, M. (1989). *More than Cool Reason: A Field Guide to Poetic Metaphor*. Chicago: University of Chicago Press.
- Langacker, R. (1987). *Foundations of Cognitive Grammar* (Vol. 1). Stanford, CA: Stanford University Press.
- Langacker, R. (1992). The symbolic nature of cognitive grammar: The meaning of of and of of-periphrasis. In: M. Pütz (Ed.), *Thirty Years of Linguistic Evolution: Studies in Honour of René Dirven on the Occasion of his Sixtieth Birthday* (pp. 483–502). Amsterdam: John Benjamins.
- Langdon, R., & Coltheart, M. (2004). Recognition of metaphor and irony in young adults: The impact of schizotypal personality traits. *Psychiatry Research*, 125, 9–20.
- Laws, K., Tejinder, K., & McKenna, P. (1999). A receptive language deficit in schizophrenic thought disorder: Evidence for impaired semantic access and monitoring. *Cognitive Neuropsychiatry*, 49, 89–106.
- Leddy, T. (1983). Davidson's rejection of metaphorical meaning. *Philosophy and Rhetoric*, 16, 63–78.
- Lee, M., & Barnden, J. (2001). Reasoning about mixed metaphors with an implemented AI system. *Metaphor and Symbol*, 16, 29–42.
- Levin, S. (1982). Are figures of thought figures of speech? In: H. Byrnes (Ed.), *Contemporary perceptions of language: Interdisciplinary dimensions* (pp. 112–123). Washington, DC: Georgetown University Press.
- Lewis, D. (1972). General semantics. In: D. Davidson & G. Harman (Eds.), *Semantics of Natural Language* (pp. 169–218). Dordrecht: D. Reidel Publishing Company.
- Littman, D., & Mey, J. (1991). The nature of irony: Toward a computational model of irony. *Journal of Pragmatics*, 15, 131–151.
- Long, D., & Graesser, A. (1988). Wit and humor in discourse processing. *Discourse Processes*, 11, 35–60.
- Lucariello, J. (1994). Situational irony: A concept of events gone awry. *Journal of Experimental Psychology: General*, 123, 129–145.
- Lyons, J. (1995). *Linguistic Semantics: An Introduction*. Cambridge: Cambridge University Press.
- Marks, L. (1982). Bright sneezes and dark coughs, loud sunlight and soft moonlight. *Journal of Experimental Psychology: Human Perception and Performance*, 8, 177–193.
- Martin, J. (1990). *A Computational Model of Metaphor Interpretation*. San Diego, CA: Academic Press.

- Martin, J. (1996). Computational approaches to figurative language. *Metaphor and Symbolic Activity*, 11, 85–100.
- Martin, J. (2000). Representing UNIX domain metaphors. *Artificial Intelligence Review*, 14, 377–401.
- Martin, R. (1992). Irony and universe of belief. *Lingua*, 87, 77–90.
- Martin, R. (2006). *The Psychology of Humor: An Integrative Approach*. London: Academic Press.
- 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, 115–126.
- Mason, Z. (2004). CorMet: A computational, corpus-based conventional metaphor extraction system. *Computational Linguistics*, 30, 23–44.
- Matthews, J., Hancock, J., & Dunham, P. (2006). The roles of politeness and humor in the asymmetry of affect in verbal irony. *Discourse Processes*, 41, 3–24.
- Mayo, R., Schul, Y., & Burnstein, E. (2004). “I am not guilty” vs. “I am innocent”: Successful negation may depend on the schema used for its encoding. *Journal of Experimental Social Psychology*, 40, 433–449.
- McElree, B., & Nordlie, J. (1999). Literal and figurative interpretations are computed in equal time. *Psychonomic Bulletin & Review*, 6, 486–494.
- Mizzau, M. (1984). *L'ironia* [The irony]. Milan: Feltrinelli.
- Monson, I. (1994). Doubleness and jazz improvisation: Irony, parody, and ethnomusicology. *Critical Inquiry*, 20, 283–313.
- Muecke, D. (1978). Irony markers. *Poetics*, 7, 363–375.
- Muecke, D. [1970]1982. *Irony and the Ironic. The Critical Idiom*. New York: Methuen.
- Narayanan, S. (1999). Moving right along: A computational model of metaphoric reasoning about events. *Proceedings of the National Conference on Artificial Intelligence*. AAAI Press.
- Neill, W., Hilliard, D., & Cooper, E. (1988). The detection of lexical ambiguity: Evidence for context-sensitive parallel access. *Journal of Memory and Language*, 27, 279–287.
- Nueckles, M., & Janetzko, D. (1997). The role of semantic similarity in the comprehension of metaphor. In: A. Brook (Ed.), *Proceedings of the 19th Annual Meeting of the Cognitive Science Society* (pp. 578–583). Norwood, NJ: Ablex Press.
- Nunberg, G. (2001). *The Way We Talk Now: Commentaries on Language and Culture from NPR's "Fresh Air"*. Boston: Houghton Mifflin Company.

- Núñez, R. (2005). Creating mathematical infinities: Metaphors, blending and the beauty of transfinite cardinals. *Journal of Pragmatics*, 37, 1717–1741.
- Oakley, T. (1998). Conceptual blending, narrative discourse, and rhetoric. *Cognitive Linguistics* 9, 321–360.
- Ortony, A. (1979). Beyond Literal Similarity. *Psychological Review*, 86, 161–180.
- Ortony, A., Clore, G., & Collins, A. (1988). *The Cognitive Structure of Emotions*. Cambridge: Cambridge University Press.
- Osterhout, L., & Mobley, L. (1995). Event-related brain potentials elicited by failure to agree. *Journal of Memory and Language*, 34, 739–773.
- 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, 64–98.
- Partington, A. (2007). Irony and reversal of evaluation. *Journal of Pragmatics*, 39, 1547–1569.
- Peleg, O. (2002). *Linguistic and nonlinguistic mechanisms in language comprehension* (Unpublished doctoral dissertation). Tel Aviv University, Tel Aviv-Yafo.
- Peleg, O., Giora, R., & Fein, O. (2001). Salience and context effects: Two are better than one. *Metaphor and Symbol*, 16, 173–92.
- Pelyvás, P. (2002). The development of modal meanings in English: Metaphorical extension or conceptual blending? In: L. Vadon (Ed.), *HUSSE Papers 2001. Proceedings of the Fifth Biennial Conference* (pp. 459–475). Eger: IEAS, Eszterházy Károly College.
- Pexman, P. (2008). It’s fascinating research: The cognition of verbal irony. *Current Directions in Psychological Science*, 17, 286–290.
- Pexman, P., & Glenwright, M. (2007). How do typically-developing children grasp the meaning of verbal irony? *Journal of Neurolinguistics*, 20, 178–196.
- Pexman, P., Ferretti, T., & Katz, A. (2000). Discourse factors that influence online reading of metaphor and irony. *Discourse Processes*, 29, 201–222.
- Pexman, P., Glenwright, M., Krol, A., & James, T. (2005). An acquired taste: Children’s perceptions of humor and teasing in verbal irony. *Discourse Processes*, 40, 259–288.
- Pilkington, A. (1997). *Shades of Irony*. Paper presented at the Ninth Annual Conference on Linguistics and Literature, University of North Texas, Denton.
- Pollio, H. Barlow, J., Fine, H., & Pollio, M. (1977). *Psychology and the Poetics of Growth: Figurative Language in Psychology, Psychotherapy, and Education*. Hillsdale, NJ: Lawrence Erlbaum.
- Pöppel, E. (1994). Temporal mechanisms in perception. *International Review of Neurobiology*, 37, 185–202.

- Popper, K. (1959). *The Logic of Scientific Discovery*. London: Allen.
- Pustejovsky, J. (1995). *The Generative Lexicon*. Cambridge, MA: MIT Press.
- 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., Leube, D., Erb, M., Grodd, W., & Kircher, T. T. (2004). Neural correlates of metaphor processing. *Cognitive Brain Research*, 20, 395–402.
- Rapp, A., Mutschler, D., Wild, B., Erb, M., Lengsfeld, I., Saur, R., & Grodd, W. (2010). Neural correlates of irony comprehension: The role of schizotypal personality traits. *Brain & Language*, 113, 1–12.
- Raskin, V. (1985). *Semantic Mechanisms of Humor*. Dordrecht: D. Reidel.
- Recanati, F. (2004). *Literal Meaning*. New York: Cambridge University Press.
- 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.
- Regel, S., Gunter, T. C., & Friederici, A. D. (2011). Isn't it ironic? An electrophysiological exploration of figurative language processing. *Journal of Cognitive Neuroscience*, 23, 277–293.
- Reyes, A., Rosso, P., & Veale, T. (2013). A multidimensional approach for detecting irony in Twitter. *Language Resources and Evaluation*, 47, 239–268.
- Richards, I. (1936). *The Philosophy of Rhetoric*. New York: Oxford University Press.
- Robert, A. (1998). Blending in the interpretation of mathematical proofs. In: J.-P. Koenig (Ed.), *Discourse and Cognition* (pp. 337–350). Stanford: Center for the Study of Language and Information.
- Roberts, R., & Kreuz, R. (1994). Why do people use figurative language? *Psychological Science*, 5, 159–163.
- Rockwell, P. (2000). Lower, slower, louder: Vocal cues of sarcasm. *Journal of Psycholinguistic Research*, 29, 483–495.
- Rorty, R. (1989). *Contingency, irony and solidarity*. Cambridge: Cambridge University Press.
- Rundquist, S. (1991). *Flouting Grice's maxims: A study of gender-differentiated speech* (Unpublished doctoral dissertation). University of Minnesota, Minneapolis.
- Russell, S. (1976). Computer understanding of metaphorically used verbs. *American Journal of Computational Linguistics*, 2, 15–28.
- Schaffer, R. (1982). *Vocal clues for irony in English* (Unpublished doctoral dissertation). Ohio State University, Columbus.

- Scholz, O. (1993). "What metaphors mean" and how metaphors refer. In: R. Stoecker (Ed.), *Reflecting Davidson: Donald Davidson Responding to an International Forum of Philosophers* (pp. 161–171). Berlin: Walter de Gruyter.
- Schütte, W. (1991). *Scherzkommunikation unter Orchestermusikern* [Humorous communication among orchestra musicians]. Tübingen: Niemeyer.
- Searle, J. (1975). Indirect speech acts. In: P. Cole & J. Morgan (Eds.), *Syntax and Semantics* (Vol. 3): *Speech Acts* (pp. 59–82). New York: Academic Press.
- Searle, J. (1979a). *Expression and Meaning: Studies in the Theory of Speech Acts*. Cambridge: Cambridge University Press.
- Searle, J. (1979b). Literal meaning. In: J. Searle (Ed.), *Expression and Meaning: Studies in the Theory of Speech Acts* (pp. 117–136). Cambridge: Cambridge University Press.
- Searle, J. (1983). *Intentionality*. Cambridge: Cambridge University Press.
- Semino, E. (2008). *Metaphor in Discourse*. Cambridge: Cambridge University Press.
- Shamay-Tsoory, S., & Aharon-Peretz, J. (2007). Dissociable prefrontal networks for cognitive and affective theory of mind: A lesion study. *Neuropsychologia*, 45, 3054–3067.
- Shamay-Tsoory, S., Tomer, R., & Aharon-Peretz, J. (2005). The neuroanatomical basis of understanding sarcasm and its relationship to social cognition. *Neuropsychology*, 19, 288–300.
- Shelley, C. (2001). The Bicoherence theory of situational irony. *Cognitive Science*, 25, 775–818.
- Shen, Y. (1989). Symmetric and asymmetric comparisons. *Poetics*, 18, 517–536.
- Shen, Y. (1992). Metaphors and categories. *Poetics Today*, 13, 771–794.
- Shen, Y. (2002). Cognitive constraints on verbal creativity. In: E. Semino & J. Culpeper (Eds.), *Cognitive Stylistics: Language and cognition in text analysis* (pp. 211–230). Amsterdam: John Benjamins Publishing.
- Shen, Y., & Balaban, N. (1999). Metaphorical (in)coherence in discourse. *Discourse Processes*, 28, 139–153.
- Shibata, M., Toyomura, A., Itoh, H., & Abe, J. (2010). Neural substrates of irony comprehension: A functional MRI study. *Brain Research*, 1308, 114–123.
- 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: P. Cole (Ed.), *Radical Pragmatics* (pp. 295–318). New York: Academic Press.
- Sperber, D., & Wilson, D. ([1986] 1995). *Relevance: Communication and Cognition*. Oxford: Blackwell.

- Sperber, D., & Wilson, D. (1998). Irony and relevance: A reply to Seto, Hamamoto and Yamanashi. In: R. Carston & S. Uchida (Eds.), *Relevance Theory: Applications and Implications* (pp. 283–293). Amsterdam: John Benjamins.
- Sperber, D., & Wilson, D. (2008). A deflationary account of metaphors. In: R. Gibbs (Ed.), *The Cambridge Handbook of Metaphor and Thought* (pp. 84–105). Cambridge: Cambridge University Press.
- Spotorno, N., Koun, E., Prado, J., Van Der Henst, J.-B., & Noveck, I. (2012). Neural evidence that utterance-processing entails mentalizing: The case of irony. *Neuroimage*, 63, 25–39.
- Sprong, M., Schothorst, P., Vos, E., Hox, J., & van Engeland, H. (2007). Theory of mind in schizophrenia: Meta-analysis. *British Journal of Psychiatry*, 191, 5–13.
- Steen, G. (2005). What counts as a metaphorically used word? The pragglejazz experience. In: S. Coulson & B. Lewandowska-Tomaszczyk (Eds.), *The Literal and Nonliteral in Language and Thought* (pp. 299–322). Berlin: Peter Lang.
- Stern, J. (2000). *Metaphor in Context*. Cambridge, MA: MIT Press.
- Sweetser, E. (1990a). *From Etymology to Pragmatics: Metaphorical and Cultural Aspects of Semantic Structure*. Cambridge: Cambridge University Press.
- Sweetser, E. (1990b). *From Etymology to Pragmatics: The Mind-As-Body Metaphor in Semantic Structure and Semantic Change*. Cambridge: Cambridge University Press.
- Sweetser, E. (1999). Compositionality and blending: semantic composition, in a cognitively realistic framework. In: T. Janssen & G. Redeker (Eds.), *Cognitive Linguistics: Foundations, Scope and Methodology* (pp. 129–162). Berlin: Mouton de Gruyter.
- Sweetser, E., & Fauconnier, G. (1996). Cognitive links and domains: Basic aspects of mental space theory. In: G. Fauconnier & E. Sweetser (Eds.), *Spaces, Worlds, and Grammar* (pp. 1–28). Chicago: University of Chicago Press.
- Tartter, V., Gomes, H., Dubrovsky, B., Molholm, S., & Stewart, R. (2002). Novel metaphors appear anomalous at least momentarily: Evidence from N400. *Brain & Language*, 80, 488–509.
- Taylor, J. ([1989] 1997). *Linguistic Categorization: Prototypes in Linguistic Theory* (2<sup>nd</sup> Edition). Oxford: Oxford University Press.
- Taylor, J. (2002). *Cognitive Grammar*. Oxford: Oxford University Press.
- Taylor, J., & Mbense, T. (1998). Red dogs and rotten mealies: How Zulus talk about anger. In: A. Athanasiadou and E. Tabakowska (Eds.), *Speaking of Emotion: Conceptualisation and Expression* (pp. 191–226). Berlin: Mouton de Gruyter.

- Tendahl, M. (2009). *A Hybrid Theory of Metaphor: Relevance Theory and Cognitive Linguistics*. Houndmills, Basingstoke, UK: Palgrave Macmillan.
- Tourangeau, R., & Rips, L. (1991). Interpreting and evaluating metaphors. *Journal of Memory and Language*, 30, 452–472.
- Turner, M. (1987). *Death is the Mother of Beauty: Mind, Metaphor, Criticism*. Chicago: University of Chicago Press.
- Turner, M. (1990). Aspects of the invariance hypothesis. *Cognitive Linguistics*, 1, 247–255.
- Turner, M. (1991). *Reading Minds: The Study of English in the Age of Cognitive Science*. Princeton, NJ: Princeton University Press.
- Turner, M. (1996). *The Literary Mind*. Oxford: Oxford University Press.
- Turner, M. (2001). *Cognitive Dimensions of Social Science*. New York: Oxford University Press.
- Turner M., & Fauconnier, G. (1995). Conceptual integration and formal expression. *Metaphor and Symbolic Activity*, 10, 183–204.
- Turner, N., & Katz, A. (1997). Evidence for the availability of conventional and of literal meaning during the comprehension of proverbs. *Pragmatics and Cognition*, 5, 203–237.
- Tversky, A. (1977). Features of similarity. *Psychological Review*, 84, 327–352.
- Tyler, A., & Evans, V. (2001). Reconsidering prepositional polysemy networks: The case of ‘over’. *Language*, 77, 724–765.
- Uchiyama, H., Seki, A., Kageyama, H., Saito, D., Koeda, T., Ohno, K., & Sadato, N. (2006). Neural substrates of sarcasm: A functional magnetic-resonance imaging study. *Brain Research*, 1124, 100–110.
- Uchiyama, H., Saito, D., Tanabe, H., Harada, T., Seki, A., Ohno, K., ... Sadato, N. (2012). Distinction between the literal and intended meanings of sentences: A functional magnetic resonance imaging study of metaphor and sarcasm. *Cortex*, 48, 563–583.
- Utsumi, A. (1996). A unified theory of irony and its computational formalization. In: *Proceedings of the 16<sup>th</sup> International Conference on Computational Linguistics* (Vol. 2) (pp. 962–967). Stroudsburg, PA: Association for Computational Linguistics.
- Utsumi, A. (2000). Verbal irony as implicit display of ironic environment: Distinguishing ironic utterances from nonirony. *Journal of Pragmatics*, 32, 1777–1806.
- Van Lancker, D., & Kempler, D. (1993). Acquisition and loss of familiar language: Idiom and proverb comprehension. In: F. Eckman (Ed.), *Confluence: Linguistics, L2 Acquisition and Speech Pathology* (pp. 249–257). Amsterdam: John Benjamins.



- Varga, E. (2015). *A nem szó szerinti nyelvhasználat vizsgálata szkizofréniában* [On the non-literal use of language in schizophrenia] (Doctoral dissertation). Retrieved from [http://aok.pte.hu/docs/phd/file/dolgozatok/2015/Varga\\_Eszter\\_PhD\\_dolgozat.pdf](http://aok.pte.hu/docs/phd/file/dolgozatok/2015/Varga_Eszter_PhD_dolgozat.pdf)
- Varga, E., Schnell, Zs., Tényi, T., Németh, N., Simon, M., Hajnal, A., ... Herold, R. (2014). Compensatory effect of general cognitive skill on non-literal language processing in schizophrenia: A preliminary study. *Journal of Neurolinguistics*, 29, 1–16.
- Veale, T., & Keane, M. (1992). Conceptual scaffolding: A spatially founded meaning representation for metaphor comprehension. *Computational Intelligence*, 8, 494–519.
- Veale, T., & Keane, M. (1997). The Competence of sub-optimal theories of Structure Mapping on Hard Analogies. In: M. Pollack (Ed.), *Proceedings of the International Joint Conference on Artificial Intelligence* (pp. 232–237). Burlington, Massachusetts: Morgan Kaufmann.
- Veale, T., O'Donoghue, D., & Keane, M. (1995). *Epistemological issues in metaphor comprehension: A comparison of three models*. Paper presented at the 4<sup>th</sup> International Cognitive Linguistics Conference, University of New Mexico, Albuquerque.
- Veale, T., O'Donoghue, D., & Keane, M. (1999). Computability as a limiting cognitive constraint: complexity concerns in metaphor comprehension about which cognitive linguists should be aware. In: M. Hiraga, C. Sinha & S. Wilcox (Eds.), *Cultural, Psychological and Typological Issues in Cognitive Linguistics* (pp. 129–154). Amsterdam/Philadelphia: John Benjamins.
- Verena, H. (2000). Metaphor in semantic change. In: A. Barcelona (Ed.), *Metaphor and Metonymy at the Crossroads* (pp. 171–194). Berlin: Mouton de Gruyter.
- 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, 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.
- Wilson, D., & Carston, R. (2006). Metaphor, relevance and the “emergent property” issue. *Mind & Language*, 21, 404–433.
- Wilson, D., & Sperber, D. (1992). On verbal irony. *Lingua*, 87, 53–76.
- 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: A. Ortony (Ed.), *Metaphor and Thought* (2<sup>nd</sup> Edition) (pp. 425–443). Cambridge, England: Cambridge University Press.

- Winner, E., Windmueller, G., Rosenblatt, E., Bosco, L., Best, E., & Gardner, H. (1987). Making sense of literal and nonliteral falsehood. *Metaphor and Symbolic Activity*, 2, 13–32.
- Wittgenstein, L. (1953). *Philosophical Investigations*. New York: Macmillan.
- Wolff, P., & Gentner, D. (1992). The time course of metaphor comprehension. *Proceedings of the Fourteenth Annual Conference of the Cognitive Science Society* (pp. 504–509). Indiana University, Bloomington.
- Wolff, P., & Gentner, D. (2000). Evidence for role-neutral initial processing of metaphors. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 26, 529–554.
- 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, 510–535.
- Zbikowski, L. (1996). *Conceptual blending and song* (Unpublished manuscript). Department of Music, University of Chicago.
- Zbikowski, L. (1999). The blossoms of “Trockne Blumen”: Music and text in the early nineteenth century. *Music Analysis*, 18, 307–345.
- Zbikowski, L. (2002). *Conceptualizing Music: Cognitive Structure, Theory, and Analysis*. Oxford: Oxford University Press.
- Zsilka, J. (1978). *Jelentés-Integráció* [Meaning integration]. Budapest: Akadémiai Kiadó.

**LIST OF PUBLICATIONS OF THE AUTHOR**

- Pálinkás, I. (2015). Integrált képek és a reprezentáció: Az irónia, a metafora és a vicc. *Nyelv és kép*, 176, 199–207.
- Pálinkás, I. (2014). Metaphor, irony and blending. *Argumentum*, 10, 611–630.
- Pálinkás, I. (2014). Blending and folk theory in an explanation of irony. *Review of Cognitive Linguistics*, 12, 64–98.
- Pálinkás, I. (2013). Irony and the standard pragmatic model. *International Journal of English Linguistics*, 3, 14–19.
- Pálinkás, I. (2008). The ‘pragmatic’ blend. *Argumentum*, 4, 204–213.
- Pálinkás, I. (2006). The development of the senses: Metaphorical extension or conceptual integration? *Argumentum*, 2, 191–197.

## APPENDICES

### Appendix A

#### *Questionnaire on metaphor (Paraphrase)*

#### **Tisztelt Hallgató!**

Pálinkás István vagyok, a Debreceni Egyetem Nyelvtudományok Doktori Iskolájának doktorjelöltje. A disszertációm véglegesítéséhez egy empirikus kutatást szükséges végeznek, amelyben nagyra értékelném szíves közreműködését.

A kutatás célja bizonyos nyelvi szerkezetek, kifejezések használatának a vizsgálata. A kérdőív anonim, az abból kinyert adatok szigorúan és kizárólag a disszertáció céljaira lesznek felhasználva.

A kérdőív kitöltése megközelítőleg 20 percet vesz igénybe.

---

NEM: Férfi/Nő

ÉLETKOR:

FOGLALKOZÁS:

Olvassa el figyelmesen az alábbi leírásokat! Mindegyikben talál egy **vastagon szedett szövegrészt**. A leírások alatti pontozott vonalra saját szavaival fogalmazza meg, hogy Ön szerint mit fejeznek ki ezek a szövegrészek!

Példa:

Adriána és Krisztina egy közös barátjukról (Letíciáról) beszélget.

Adriána: Hallottad, hogy Letíciának ellopták a Kona Supreme bicaját?

Krisztina: Komolyan? Ez már a 2., amit elloptak tőle egy hónapon belül. Hol?

Adriána: A Plaza előtt, csütörtök este.

Krisztina: Gondolom kivolt.

Adriána: Ott voltam. Hát, **szikrát szórt a szeme**, az biztos!

Letícia nagyon mérges volt.

.....

---

1.

Egy nagyvállalat igazgatótanácsa új tagot választ a testületbe. Tamás (az egyik jelölt) meghallgatása után hazamegy, és a feleségével (Katalinnal) beszélget.

Katalin: Drágám, milyen volt az igazgatótanácsi meghallgatás?

Tamás: Ne is kérdezd! Három órán keresztül faggattak.

Katalin: Miről?

Tamás: Az üzleti terveim felől érdeklődtek.

Katalin: És bíztattak valamivel?

Tamás: Bár a terveket rendben találták, **a bizottság sötétben hagy tapogatózni mindaddig, amíg az összes jelöltet meg nem hallgatják.**

.....

2.

Éva és Balázs együtt járnak évek óta. Egyik nap azonban – egy kisebb veszekedés után – Éva így szól Balázshoz:

Éva: Balázs, úgy érzem, **a kapcsolatunk zsákutcába jutott.**

.....

3.

Péter összetörte az autóját, de a biztosító társaság nem hajlandó fizetni. Péter jogi lépéseket tett az ügyben, bírósági úton szeretne jogorvoslatot kapni. A következő párbeszédben Péter a barátjával, Zsolttal beszélget.

Péter: Képzeld, barátom, a múlt hónapban összetörtem az autómat.

Zsolt: Ne mondd! Nagy anyagi károd lett?

Péter: Behorpadt a lökhárító, és a hátsó lámpákat is ki kellett cserélni. A baj csak az, hogy a biztosító cég nem hajlandó fizetni.

Zsolt: Most mi lesz?

Péter: Bepereltem a társaságot, fogadtam egy ügyvédet.

Zsolt: Jó ügyvéd?

Péter: Hogy jó-e? **Egy igazi cápa!**

.....

4.

János telkén almafákat gondoz. Egy nyári reggelen szomorúan látja, hogy valaki kivágta az egyik fáját. Még aznap találkozik testvérével, Mátéval. Neki panaszkodik.

Máté: Szervusz, János! Hogy vagy?

János: Ne is kérdezd! **Majd' szétrobbanok!**

Máté: Mi történt, bátyám?

János: Reggel kimentem a telekre, és megláttam, hogy valaki kivágta az egyik almafámat.

.....

5.

László egy nyelvészeti konferencián vesz részt. Miután hazaér, a feleségével (Eszterrel) beszélget az előadásáról.

Eszter: Hogy sikerült az előadás kedvesem?

László: Remekül. Kitartóan érveltem egy nyelvészeti modell mellett, és bár **az érvelésem minden gyenge pontját hevesen támadták**, a legtöbb felvetést sikeresen megválaszoltam!

.....

6.

Edit és Zoltán fia (Gábor) nemrég diplomázott, és rögtön állást is kapott egy jól menő cégnél. A boldog szülők ennek kapcsán beszélgetnek.

Edit: Hál' Istennek Gábor lediplomázott, és sikerült elhelyezkednie egy nem is akármilyen cégnél.

Zoltán: Így van, nyugodtan mondhatjuk: **Gábor révbe ért**.

.....

7.

Éva és Judit fizika szakos egyetemi hallgatók. Az egyik szeminárium előtt beszélgetnek a közelmúlt eseményeiről.

Éva: Én már általános iskolás korom óta rajongok a fizikáért. És te?

Judit: Én a középiskolában szerettem meg. Kovács tanárnő **fertőzött meg a fizikával**.

.....

8.

Ábel unokatestvérét (Mártont) kérdezi az új munkahelyéről.

Ábel: Úgy hallom, Márton, új munkahelyed van egy számítástechnikai cégnél.

Márton: Így van, de ne is beszéljünk róla!

Ábel: Miért?

Márton: Mert **egy igazi börtön**.

.....

9.

Dávid egyetemista, aki ma államvizsgázott. Hazaérve édesapjának (Zoltánnak) mesél a vizsgán szerzett tapasztalatairól.

Dávid: Képzeld édesapám, brit történelemből 5-öst kaptam!

Zoltán: Remek, akkor gondolom, mindent tudtál.

Dávid: Bár volt olyan kérdés, amelynél **teljesen lefagytam**, végül kimagyaráztam magam.

.....

**KÖSZÖNÖM A KÖZREMŰKÖDÉST!**

## Appendix B

*Questionnaire on metaphor (Paraphrase – English translation)***Dear Undergraduate Student,**

I am István Pálincás, a Ph.D candidate at the Doctoral School of Linguistics, at the University of Debrecen. In order to finalise my dissertation I need to conduct an empirical research, in which your kind participation would be greatly appreciated.

The aim of the research is to examine the use of particular language structures. The questionnaire is anonymous. The data obtained from it will be used exclusively for the purposes of the dissertation.

Completion of the questionnaire takes approximately 20 minutes.

---

SEX: Male/Female

AGE:

OCCUPATION:

Read the following descriptions carefully. Each contains **some text in bold**. Please, explain these highlighted parts in your own words on the dotted lines following the descriptions.

Example:

Adriána and Krisztina are talking about a mutual friend, Letícia.

Adriána: Have you heard that Letícia's Kona Supreme bike has been stolen?

Krisztina: Really? That is the second bike that she has had stolen within a month. Where did it happen?

Adriána: In front of the Plaza. It happened on Thursday evening.

Krisztina: I guess she was pissed off.

Adriána: Yes, I was there. Well, **her eyes were burning with rage, I can tell you.**

Letícia was very angry. ....

---



1.

The board of directors in a large company is about to elect a new member to the board. After his interview, one of the candidates, Tamás, goes home and talks to his wife, Katalin.

Katalin: How did the interview go, darling?

Tamás: Don't ask! They had been questioning me for 3 hours!

Katalin: What about?

Tamás: They asked me about my business plans.

Katalin: Did they promise anything?

Tamás: Although they found the plans acceptable, **the board keeps me in the dark until all the candidates have been interviewed.**

.....

2.

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.**

.....

3.

Péter crashed his car but the insurance company is not willing to pay. Péter takes legal action. He hopes to get legal remedy in court. In the following conversational exchange Péter is talking to his friend, Zsolt.

Péter: Imagine, my friend. I crashed my car last month.

Zsolt: Don't say! Is it badly damaged?

Péter: The bumper got dented and the rear lights also needed to be replaced. The only problem is that the insurance company is not willing to pay.

Zsolt: What now?

Péter: I'm gonna sue the company. I have hired a lawyer.

Zsolt: Is he good?

Péter: Is he? **He is a real shark.**

.....

4.

János grows apple trees on his plot of land. On a summer morning he is sad to see that somebody has cut down one of his trees. The same day he meets his brother, Máté. He is complaining to him.

Máté: Hey János, how are you?

János: Don't ask! **I'm blowin' up!**

Máté: What happened, brother?

János: I went to the plot in the morning and saw that someone had cut down one of my apple trees.

.....

5.

László attends a linguistic conference. When he gets home, he talks to his wife, Eszter, about his lecture.

Eszter: How did your lecture go, darling?

László: It was fine. I was arguing for a linguistic model persistently. Although **they attacked every weak point in my argument quite fiercely** I managed to answer most questions successfully.

.....

6.

Edit and Zoltán's son, Gábor, has just graduated from university. He is now working for a successful company. The happy parents are talking about their son.

Edit: Thank God Gábor has graduated and managed to take up a job in a prosperous company.

Zoltán: That's right, now we can say that **Gábor has found a berth**.

.....

7.

Éva and Judit are Physics majors. Before one of the seminars they are talking about the near past.

Éva: I've been a great fan of Physics since primary school. And you?

Judit: I came to like it in high school. It was my teacher Mrs Kovács who **infected me with Physics**.

.....

8.

Ábel asks his cousin, Márton, about his new job.

Ábel: As I heard, Márton, you had a new job in an IT company.

Márton: That's right but let us not talk about it.

Ábel: Why?

Márton: Because **it's a real prison**.

.....

9.

Dávid is a university student. He has just passed his state exam. When he gets home he talks to his father, Zoltán, about his experiences.

Dávid: Just imagine Dad, I got a 5 in British History.

Zoltán: Great! You must have known everything.

Dávid: **I totally froze up** on a couple of questions but I finally managed to answer them.

.....

**THANK YOU FOR YOUR HELP!**

## Appendix C

*Some examples of paraphrase which show subjects' expected (metaphorical) understanding of the key elements*

	Items (the metaphors/key elements only)	Examples of paraphrase
1.	A bizottság sötétben hagy tapogatózni mindaddig, amíg az összes jelöltet meg nem hallgatják. The board keeps me in the dark until all the candidates have been interviewed.	bizonytalan (unsure); nem tudja a döntést (does not know the decision); bizonytalanságban tart (keeps in uncertainty); nem értesít (keeps uninformed); nem mondják meg (will not tell)
2.	A kapcsolatunk zsákutcába jutott. Our relationship has hit a dead-end street.	szakít (break up); nem vezet sehová (leads nowhere); nincs jövője (has no future); vége van (is over); végét járja (is coming to an end); bajban van (is in trouble)
3.	Ő egy igazi cápa! He is a real shark.	nagyon jó ügyvéd (is a very good lawyer); kiváló a szakmájában (excels in his profession); hatékony (effective); eredményes (successful); lecsap minden lehetőségre (seizes every opportunity)
4.	Majd' szétrobbanok! I'm blowin' up!	dühös, mérges (angry); ideges (nervous)
5.	Az érvelésem minden gyenge pontját hevesen támadták. They attacked every weak point in my argument quite fiercely.	kritizálták (made critical remarks); megkérdőjelezték (queried); az érvelés ellen foglaltak állást (opposed the argument); nem voltak elégedettek (were not satisfied)
6.	Gábor révbe ért. Gábor has found a berth.	elérte célját (reached his goal); sikeres (successful); teljesítette a célját (accomplished his goal); sínen van (is on the right track)
7.	Kovács tanárnő fertőzött meg a fizikával. It was my teacher Mrs Kovács who infected me with Physics.	a tanár hatására (due to the teacher); megszerettette vele (inspired her to like); felkeltette az érdeklődését (arouse her interest); szereti (likes); órájának köszönhetően (thanks to her classes)
8.	Egy igazi börtön. It's a real prison.	egy borzalmas hely (an awful place); sok kötöttség (many restrictions); szigorú szabályok (strict rules); nem érzi ott jól magát (feels bad there); bezárva/fogságban érzi magát (feels locked up/imprisoned)
9.	Teljesen lefagytam. I totally froze up.	nem tudott egyből válaszolni (was unable to answer immediately); nem tudta a választ (did not know the answer); nem jutott eszébe (could not remember); meglepődött (got surprised); leblokkolt (went blank)

## Appendix D

*Questionnaire on metaphor (Constructing situations)***Tisztelt Hallgató!**

Pálinkás István vagyok, a Debreceni Egyetem Nyelvtudományok Doktori Iskolájának doktorjelöltje. A disszertációm véglegesítéséhez egy empirikus kutatást szükséges végezzenek, amelyben nagyra értékelném szíves közreműködését.

A kutatás célja bizonyos nyelvi szerkezetek, kifejezések használatának a vizsgálata. A kérdőív anonim, az abból kinyert adatok szigorúan és kizárólag a disszertáció céljaira lesznek felhasználva.

A kérdőív kitöltése megközelítőleg 30 percet vesz igénybe.

---

NEM: Férfi/Nő

ÉLETKOR:

FOGLALKOZÁS:

Alkosson rövid (maximum 5-6 soros) párbeszédeket az alábbi kifejezések felhasználásával! Lásd az alábbi példát:

Kifejezés: **Te vagy a fény az életemben!**

Szituáció: Tamara és Zsolt egy párt alkotnak. A következő párbeszéd zajlik köztük:

Zsolt: Tamara, mit jelentek én számodra az életben?

Tamara: **Te vagy a fény az életemben**, drágám!

---

1.

Kifejezés: **A bizottság sötétben hagy tapogatózni mindaddig, amíg az összes jelöltet meg nem hallgatják.**

Szituáció:

.....

.....

.....

.....

.....

.....

2.

Kifejezés: **A kapcsolatunk zsákutcába jutott.**

Szituáció:

.....

.....

.....

.....

.....

.....

3.

Kifejezés: **Ő egy igazi cápa!**

Szituáció:

.....

.....

.....

.....

.....

.....

4.

Kifejezés: **Majd' szétrobbanok!**

Szituáció:

.....

.....

.....

.....

.....

.....

5.

Kifejezés: **Az érvelésem minden gyenge pontját hevesen támadták.**

Szituáció:

.....

.....

.....

.....

.....

.....

6.

Kifejezés: **Gábor révbe ért.**

Szituáció:

.....

.....

.....

.....

.....

.....

7.

Kifejezés: **Kovács tanárnő fertőzött meg a fizikával.**

Szituáció:

.....

.....

.....

.....

.....

.....

8.

Kifejezés: **A munkahelyem egy igazi börtön.**

Szituáció:

.....

.....

.....

.....

.....

.....

9.

Kifejezés: **Teljesen lefagytam. Végül kimagyaráztam magam.**

Szituáció:

.....

.....

.....

.....

.....

.....

**KÖSZÖNÖM A KÖZREMŰKÖDÉST!**

## Appendix E

*Questionnaire on metaphor (Constructing situations – English translation)***Dear Undergraduate Student,**

I am István Pálincás, a Ph.D candidate at the Doctoral School of Linguistics, at the University of Debrecen. In order to finalise my dissertation I need to conduct an empirical research, in which your kind participation would be greatly appreciated.

The aim of the research is to examine the use of particular language structures. The questionnaire is anonymous. The data obtained from it will be used exclusively for the purposes of the dissertation.

Completion of the questionnaire takes approximately 30 minutes.

---

SEX: Male/Female

AGE:

OCCUPATION:

Make short (at the most 5-6 lines) conversations using the given expressions. Consider the example below:

Expression: **You are the light in my life!**

Situation: Tamara and Zsolt are a couple. They are involved in the following conversational exchange:

Zsolt: What do I mean to you, Tamara?

Tamara: **You are the light in my life**, darling!

---

1.

Expression: **The board keeps me in the dark until all the candidates have been interviewed.**

Situation:

.....

.....

.....

.....

.....



2.

Expression: **Our relationship has hit a dead-end street.**

Situation:

.....

.....

.....

.....

.....

.....

3.

Expression: **He is a real shark!**

Situation:

.....

.....

.....

.....

.....

.....

4.

Expression: **I'm blowin' up!**

Situation:

.....

.....

.....

.....

.....

.....

5.

Expression: **They attacked every weak point in my argument quite fiercely.**

Situation:

.....

.....

.....

.....

.....

.....

6.

Expression: **Gábor has found a berth.**

Situation:

.....

.....

.....

.....

.....

.....

7.

Expression: **It was my teacher Mrs Kovács who infected me with Physics.**

Situation:

.....

.....

.....

.....

.....

.....

8.

Expression: **My workplace is a real prison.**

Situation:

.....

.....

.....

.....

.....

.....

9.

Expression: **I totally froze up but I finally managed to answer the questions.**

Situation:

.....

.....

.....

.....

.....

.....

**THANK YOU FOR YOUR HELP!**

Appendix F  
*Questionnaire on irony*

**Tisztelt Hallgató!**

Pálinkás István vagyok, a Debreceni Egyetem Nyelvtudományok Doktori Iskolájának doktorjelöltje. A disszertációm véglegesítéséhez egy empirikus kutatást szükséges végeznek, amelyben nagyra értékelném szíves közreműködését.

A kutatás célja bizonyos nyelvi szerkezetek, kifejezések használatának a vizsgálata. A kérdőív anonim, az abból kinyert adatok szigorúan és kizárólag a disszertáció céljaira lesznek felhasználva.

A kérdőív kitöltése megközelítőleg 15 percet vesz igénybe.

---

NEM: Férfi/Nő  
ÉLETKOR:  
FOGLALKOZÁS:

Olvassa el figyelmesen az alábbi leírásokat! Egy kivételével mindegyikben talál egy **vastagon szedett szövegrészt**. Döntse el, hogy ezek a szövegrészek ironikusak-e vagy sem! Válaszát jelölje X-szel a mellékelt válaszlap megfelelő rubrikájában!

Figyelem! A 7. leírásban nincs vastagon szedett szövegrész. Ott a *teljes szituációt* értékelje az ironikusság szempontjából!

Példa 1:

Anélia és Dorisz meglátogatják barátnőjüket, Johannát. A lakásban hideg van. Egyszer, mikor Johanna nem figyel, Anélia odaszól Dorisznak:

Anélia: **Hú, de meleg van itt!**

Példa 2:

Anélia és Dorisz meglátogatják barátnőjüket, Johannát. A lakásban meleg van. Egyszer, mikor Johanna nem figyel, Anélia odaszól Dorisznak:

Anélia: **Hú, de meleg van itt!**

---

1.

Judit hazafelé autózik barátnőjével, Barbarával. Egy autós sávváltás közben indexelés nélkül Judit autója elé vág meglehetősen balesetveszélyes módon. Erre Judit a következőt mondja:

Judit: **Szeretem azokat az autósokat, akik indexelnek sávváltáskor!**

2.

Egy nagyvállalat igazgatótanácsa új tagot választ a testületbe. Tamás (az egyik jelölt) meghallgatása után hazamegy, és a feleségével (Katalinnal) beszélget.

Katalin: Drágám, milyen volt az igazgatótanácsi meghallgatás?

Tamás: Ne is kérdezd! Három órán keresztül faggattak.

Katalin: Miről?

Tamás: Az üzleti terveim felől érdeklődtek.

Katalin: És bíztattak valamivel?

Tamás: Bár a terveket rendben találták, **a bizottság sötétben hagy tapogatózni mindaddig, amíg az összes jelöltet meg nem hallgatják.**

3.

Eszter és munkatársa (Patrik) egyszerre érnek munkahelyük bejáratí ajtájához. Patrik kezében egy könyvekkel teli doboz van. Mindketten ugyanabba az irányba tartanak. Eszter kissé hamarabb ér az ajtóhoz, bemegy rajta, és ahelyett, hogy tartaná azt, amíg Patrik odaér, elengedi az ajtót, amely rácsapódik Patrikra. Erre Patrik a következőt mondja:

Patrik: **Kösz!**

4.

István és Márk osztálytársak és jó barátok. Az iskolában egymás mellett ülnek. Egy nap matematika órán dolgozatot írnak. Márknak nehézségei akadnak a dolgozatírás során, István azonban nem segít neki. Óra után Márk így szól Istvánhoz:

Márk: **Szép kis barát vagy, mondhatom!**

5.

Éva és Balázs együtt járnak évek óta. Egyik nap azonban – egy kisebb veszekedés után – Éva így szól Balázshoz:

Éva: Balázs, úgy érzem, **a kapcsolatunk zsákutcába jutott.**

6.

Egy arizonai börtönben egy halálra ítélt rab a kivégzése előtt szívinfarktust kap. Műtetre kerül sor, melynek köszönhetően megmentik az életét. Azonban – az ítéletnek megfelelően – a műtétet követően hamarosan kivégzik.

7.

Péter összetörte az autóját, de a biztosító társaság nem hajlandó fizetni. Péter jogi lépéseket tett az ügyben, bírósági úton szeretne jogorvoslatot kapni. A következő párbeszédben Péter a barátjával, Zsolttal beszélget.

Péter: Képzeld, barátom, a múlt hónapban összetörtem az autóm.

Zsolt: Ne mondd! Nagy anyagi károd lett?

Péter: Behorpadt a lökhárító, és a hátsó lámpákat is ki kellett cserélni. A baj csak az, hogy a biztosító cég nem hajlandó fizetni.

Zsolt: Most mi lesz?

Péter: Bepereltem a társaságot, fogadtam egy ügyvédet.

Zsolt: Jó ügyvéd?

Péter: Hogy jó-e? **Egy igazi cápa!**

8.

Katalin és Balázs házaspár. Egy esküvői fogadáson táncolnak, miközben Balázs többször rálép Katalin lábfejeire. Katalin a következőképpen reagál erre:

Katalin: **Remekül táncolsz, drágám!**

9.

János telkén almafákat gondoz. Egy nyári reggelen szomorúan látja, hogy valaki kivágta az egyik fáját. Még aznap találkozik testvérével, Mátéval. Neki panaszkodik.

Máté: Szervusz, János! Hogy vagy?

János: Ne is kérdezd! **Majd' szétrobbanok!**

Máté: Mi történt, bátyám?

János: Reggel kimentem a telekre, és megláttam, hogy valaki kivágta az egyik almafámat.

10.

László egy nyelvészeti konferencián vesz részt. Miután hazaér, a feleségével (Eszterrel) beszélget az előadásáról.

Eszter: Hogy sikerült az előadás kedvesem?

László: Remekül. Kitartóan érveltem egy nyelvészeti modell mellett, és bár **az érvelésem minden gyenge pontját hevesen támadták**, a legtöbb felvetést sikeresen megválasztam!

11.

Edit és Zoltán fia (Gábor) nemrég diplomázott, és rögtön állást is kapott egy jól menő cégnél. A boldog szülők ennek kapcsán beszélgetnek.

Edit: Hál' Istennek Gábor lediplomázott, és sikerült elhelyezkednie egy nem is akármilyen cégnél.

Zoltán: Így van, nyugodtan mondhatjuk: **Gábor révbe ért.**

12.

Egy házaspár (Adél és Norbert) rövid kirándulást tervez a hétvégére. A tervezett kirándulás reggelén viharos az idő. Adél az ablakhoz lép, kinéz rajta, és így szól:

Adél: **Milyen szép időnk van ma!**

13.

Éva és Judit fizika szakos egyetemi hallgatók. Az egyik szeminárium előtt beszélgetnek a közelmúlt eseményeiről.

Éva: Én már általános iskolás korom óta rajongok a fizikáért. És te?

Judit: Én a középiskolában szerettem meg. Kovács tanárnő **fertőzött meg a fizikával.**

14.

Ábel unokatestvérét (Mártont) kérdezi az új munkahelyéről.

Ábel: Úgy hallom, Márton, új munkahelyed van egy számítástechnikai cégnél.

Márton: Így van, de ne is beszéljünk róla!

Ábel: Miért?

Márton: Mert **egy igazi börtön**.

15.

Albert otthon rálép egy padlón felejtett csavarhúzóra. Megbotlik, kibicsaklik a bokája. Erre a következőt mondja:

Albert: **Remek!**

16.

Dávid egyetemista, aki ma államvizsgázott. Hazaérve édesapjának (Zoltánnak) mesél a vizsgán szerzett tapasztalatairól.

Dávid: Képzeld édesapám, brit történelemből 5-öst kaptam!

Zoltán: Remek, akkor gondolom, mindent tudtál.

Dávid: Bár volt olyan kérdés, amelynél **teljesen lefagytam**, végül kimagyaráztam magam.

**KÖSZÖNÖM A KÖZREMŰKÖDÉST!**

## Appendix G

*Questionnaire on irony (English translation)***Dear Undergraduate Student,**

I am István Pálinkás, a Ph.D candidate at the Doctoral School of Linguistics, at the University of Debrecen. In order to finalise my dissertation I need to conduct an empirical research, in which your kind participation would be greatly appreciated.

The aim of the research is to examine the use of particular language structures. The questionnaire is anonymous. The data obtained from it will be used exclusively for the purposes of the dissertation.

Completion of the questionnaire takes approximately 15 minutes.

---

SEX: Male/Female

AGE:

OCCUPATION:

Read the following descriptions carefully! In all but one some of the text **is bold**. Your task is to decide if those highlighted parts are ironic or not. Indicate your answers in the appropriate column on the answer sheet!

Please note that there is no highlighted part in description 7. There you are asked to evaluate *the whole situation* in terms of ironicalness.

Example 1:

Anélia and Dorisz are visiting their friend, Johanna. It is cold in the flat. Once, when Johanna is not listening, Anélia turns to Dorisz and says:

Anélia: It's so hot in here.

Example 2:

Anélia and Dorisz are visiting their friend, Johanna. It is hot in the flat. Once, when Johanna is not listening, Anélia turns to Dorisz and says:

Anélia: It's so hot in here.

---

1.

Judit and her friend, Barabara, are driving home. A motorist when changing lanes cuts in front of them without signalling. There is clearly a risk of accident. As a reaction to the driver's manoeuvre Judit says:

Judit: **I love people who signal when changing lanes!**

2.

The board of directors in a large company is about to elect a new member to the board. After his interview, one of the candidates, Tamás, goes home and talks to his wife, Katalin.

Katalin: How did the interview go, darling?

Tamás: Don't ask! They had been questioning me for 3 hours!

Katalin: What about?

Tamás: They asked me about my business plans.

Katalin: Did they promise anything?

Tamás: Although they found the plans acceptable, **the board keeps me in the dark until all the candidates have been interviewed.**

3.

In their workplace Eszter and one of her colleagues, Patrik, arrive at the door at the same time. Patrik is carrying a box full of books. They are heading in the same direction. Eszter has reached the door a bit earlier. She walks through the doorway, and instead of holding the door until Patrik gets there, she lets it swing shut. As a reaction Patrik says:

Patrik: **Thanks!**

4.

István and Márk are classmates and good friends. They are sitting together at school. One day they are writing a test in Maths. Although Márk has difficulties with the test, István does not help him. After class Márk turns to István and says:

Márk: **You are a nice friend, I can say!**

5.

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.**

6.

In a prison in Arizona a murderer who has been sentenced to death has a heart attack. He gets operated, as a result of which they save his life. However, in accordance with the verdict, he is executed soon after the life-saving operation.

7.

Péter crashed his car but the insurance company is not willing to pay. Péter takes legal action. He hopes to get legal remedy in court. In the following conversational exchange Péter is talking to his friend, Zsolt.

Péter: Imagine, my friend. I crashed my car last month.

Zsolt: Don't say! Is it badly damaged?

Péter: The bumper got dented and the rear lights also needed to be replaced. The only problem is that the insurance company is not willing to pay.

Zsolt: What now?



Péter: I'm gonna sue the company. I have hired a lawyer.

Zsolt: Is he good?

Péter: Is he? **He is a real shark.**

8.

Katalin and Balázs are married. They are dancing at a wedding reception. Balázs steps on Katalin's foot several times. Katalin says:

Katalin: **You really are a good dancer, darling!**

9.

János grows apple trees on his plot of land. On a summer morning he is sad to see that somebody has cut down one of his trees. The same day he meets his brother, Máté. He is complaining to him.

Máté: Hey János, how are you?

János: Don't ask! **I'm blowin' up!**

Máté: What happened, brother?

János: I went to the plot in the morning and saw that someone had cut down one of my apple trees.

10.

László attends a linguistic conference. When he gets home, he talks to his wife, Eszter, about his lecture.

Eszter: How did your lecture go, darling?

László: It was fine. I was arguing for a linguistic model persistently. Although **they attacked every weak point in my argument quite fiercely** I managed to answer most questions successfully.

11.

Edit and Zoltán's son, Gábor, has just graduated from university. He is now working for a successful company. The happy parents are talking about their son.

Edit: Thank God Gábor has graduated and managed to take up a job in a prosperous company.

Zoltán: That's right, now we can say that **Gábor has found a berth.**

12.

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.**

13.

Éva and Judit are Physics majors. Before one of the seminars they are talking about the near past.

Éva: I've been a great fan of Physics since primary school. And you?

Judit: I came to like it in high school. It was my teacher Mrs Kovács who **infected me with Physics**.

14.

Ábel asks his cousin, Márton, about his new job.

Ábel: As I heard, Márton, you had a new job in an IT company.

Márton: That's right but let us not talk about it.

Ábel: Why?

Márton: Because **it's a real prison**.

15.

In his home Albert steps on a screw-driver which he has left on the floor. He stumbles and sprains his ankle. As a reaction he says:

Albert: **Oh, great!**

16.

Dávid is a university student. He has just passed his state exam. When he gets home he talks to his father, Zoltán, about his experiences.

Dávid: Just imagine Dad, I got a 5 in British History.

Zoltán: Great! You must have known everything.

Dávid: **I totally froze up** on a couple of questions but I finally managed to answer them.

**THANK YOU FOR YOUR HELP!**

## Appendix H

*Questionnaire on irony – Answer sheet***VÁLASZLAP**

<b>Sorszám</b>	<b>Ironikus</b>	<b>Nem ironikus</b>
Példa 1	X	
Példa 2		X
1.		
2		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		
13.		
14.		
15.		
16.		

Appendix I

*Questionnaire on irony – Answer sheet (English translation)*

**ANSWER SHEET**

<b>Number</b>	<b>Ironie</b>	<b>Not ironic</b>
Example 1	X	
Example 2		X
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		
13.		
14.		
15.		
16.		