Agnieszka Kaleta

Metaphors in business and economics: A quantitative, corpus-based study

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Recenzent:
dr hab. Iwona Kokorniak

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Uniwersytet Jana Kochanowskiego w Kielcach
Filia w Piotrkowie Trybunalskim
ul. J. Słowackiego 114/118, 97-300 Piotrków Trybunalski
tel.: 44 732 74 00 w. 171, 172
e-mail: wydawnictwopt@ujk.edu.pl

Dystrybucja: ksiegarnia@unipt.pl

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PART ONE: THE THEORY

1. Introduction: From Saussure to a new cognitive turn in linguistics

> *Language is so intricately and intimately bound up with human life, and is so familiar an experience, that its essential nature is not easy to discern. If you are in the middle of the wood all you can see is the trees: if you want to see the wood you have to get out of it.* (H.G. Widdowson, 1996: 17)

New scientific theories do not appear in vacuum – they are either logical extensions or modifications of some generally received ideas and opinions or, alternatively, are shaped in the process of opposition to what is accepted to be a valid trend at a given point in time. It might be also the case that these two paths converge, that is some aspects of the old theory are accepted and extended, whereas others are fiercely combated and substituted with fresh ideas. It seems that it is this last option that prevails in the majority of scientific fields including linguistics. The transformational-generative model, for example, has preserved Saussure's distinction between linguistic ideal (language) and actual acts of speech (parole), which have been extended by Chomsky to his 'competence' and 'performance', respectively. The point, however, is that Chomsky's perception of the workings of language is quite distinct from his structural predecessors in many important respects, one of his major contributions being the broadening of the scope of linguistic enquiry. While Saussure and his followers, headed by Bloomfield, focused on the surface representation of language in the form of linguistic structure, Chomsky has gone much deeper to investigate the universals of human mind. Hence, the most important thing about language from this point of view is that it is the evidence for the special faculty of the human mind. Chomsky's theory, albeit criticized on various occasions, cannot be denied one thing, namely that it has put a new perspective, we should add a *cognitive* perspective, on our understanding of the nature of language. This, in turn, seems to have paved the way for the latest development in the field of linguistics, which tends to be labeled as *cognitive linguistics*. This new trend began to emerge at the end of the seventies and has continued in various shapes and forms up to the present day. The prominent linguists in the field include Brugman (1998, 1990), Fauconnier (1985, 1997), Fauconnier and Turner (1994, 1998), Fillmore (1976, 1977, 1985), Goldberg (1995), Johnson (1987), Lakoff (1980, 1987, 1989, 1998), Lamb (1999), Langacker (1987, 1990, 1991), Sweetser (1990), Talmy (2000), Turner (2014), Turner and Lakoff (1989), just to mention but a few names. Most of these scholars like to conceive of themselves as complete revolutionist in the field and repeatedly demonstrate their opposition to the earlier theories and approaches to language description including Chomskyan 'universal grammar'. The well-known hypothesis that langue is an autonomous, innate faculty has been discredited and exposed as flawed in cognitively oriented researches. Instead, cognitive linguists have come to emphasize the conceptual underpinnings of language faculty, showing how language interacts with other cognitive abilities or faculties. Yet, is not to say that no word of acknowledgment has ever been directed towards the father

of the generative-transformational model. It should suffice to cite here Lakoff (1999) who, in his voluminous *Body in the Flesh: The Embodied Mind And Its Challenge To Western Though*, states what follows:

> Chomsky deserves enormous credit for helping to bring into cognitive science the idea of the cognitive unconscious as it applies to grammar. It was largely through Chomsky's influence that first-generation cognitive scientists became aware of the enormous range of phenomena composing the cognitive unconscious. (p. 472)

Thus, the logic of scientific progress has been preserved here – the cognitive seeds, as first sowed by Chomsky, have given rise to a new scientific quality in the form of a new branch of linguistics, that is Cognitive Linguistics, as it is known today, with its illuminating findings on the nature of language and cognitive processing in the human mind. Some of the earliest achievements of this second-generation cognitivists are in the field of metaphor research, as rediscovered by Lakoff and Johnson in their foundational 1980 volume *Metaphors we live by*. It was then that metaphor was presented as a conceptual phenomenon, an indispensable element of human thought and reasoning and an inevitable part of everyday human communication. As the decades have passed, this view of metaphor has continued to inspire linguists to undertake new scientific efforts in order to better understand the intricate nature of metaphorical thought and language in different areas of linguistic (and non-linguistic) communication and at different levels of linguistic organization (e.g., Charteris-Black, 2004; Dancygier & Sweetser, 2014; Deignan et al., 2013; Goatly, 1997; Jäkel, 1997; Littlemore, 2019, Low et al., 2010; Musolff, 2004; Semino, 2008; Steen, 1994, 2018). Given the pervasiveness of metaphorical conceptualizations, that is the fact that almost any abstract concept in any language has metaphorical structure, metaphor research does not look like a finished project, and most likely will not be one in the foreseeable future. New questions and challenges (both descriptive and theoretical) are still emerging and wait to be answered in the course of empirical investigations. One of these challenges seems to be assessing the degree of cognitive scope or entrenchment of conceptual metaphors in different registers and across different languages. In other words, there is still a need for frequency-based, comparative studies, aimed at establishing the range (frequency) of particular metaphors, both in their linguistic and conceptual dimension. The most suitable methodology for this type of research seems to be corpus-based methodology. Although some successful attempts have been made to apply corpus methods to metaphor research (cf. Charteris-Black, 2004; Deignan, 2005; Semino, 2017, Stefanowitsch & Gries, 2005), it seems that the full potential of this line of research is yet to be to explored.

The present study continues this line of research by looking specifically at the metaphors structuring the broad domain of business/ economic activity. In particular, this broad domain is approached from axiological point of view, with the domains of *successful* and *poor business performance* being the primary objects of investigation. Importantly, the study takes a cross-linguistic and comparative approach. That is, it investigates metaphors in English and Polish business and economics related journalistic texts. My principle objective has been to investigate whether, what is termed here *axiological metaphors*, are cross-linguistic phenomena or whether there are concepts unique to one or the other language. In addition, a

corpus-based methodology has been employed to collect the quantitative data and to assess the degree of conceptual salience and productivity of metaphorical mapping yielded by the corpus.

It should be pointed out here that some investigations into the metaphorical structure of the domain of business and economics have been undertaken earlier (cf. Boers, 1997a, 1997b, 1997c, 2000; Henderson, 1986; Hübler, 1989). Yet, none of these studies have explicitly dealt with the axiological aspect of metaphorical mappings employed to think and talk about business phenomena. Furthermore, the majority of these studies were rather limited in scope, typically not going beyond the constraints of single articles. Most importantly, I have not been able to trace any relevant publications which would aim at contrasting English and Polish language data. It should be also emphasized that the previous research has given hardly any attention to the quantitative aspect of metaphorical concepts. In other words, very little systematic work has been done towards assessing the degree of conceptual entrenchment of particular metaphorical models and the productivity of particular mappings structuring the domain of business activity. The research presented in the analytical part of this book (Chapters 5-9) addresses all these problems and questions. However, the study is preceded by a few chapters which raise various theoretical issues related to the topic of the study. Thus, chapters (2)-(4) are aimed at giving the reader (especially students and new researchers) a basic introduction to the theory of metaphor, the issues associated with the structure of specialized discourses, as well as the basics of corpus-based research. In the following, I present a brief summary of the chapters in this book.

Chapter 2 gives a brief overview of Aristotelian ideas on the subject of metaphor mainly to contrast them with the cognitive theory, but also to unveil some signs of the cognitive orientation as traced in his *Rhetoric*. More attention has been given to Black's views, most notably those which heralded the cognitive approach. The remaining part of the chapter has been designed as a concise synthesis of topics in the cognitive theory of metaphor, which have been considered within a broader context of cognitive science and cognitive linguistics in particular.

Chapter 3 sheds some light on the notion of linguistic variability, which has been approached from many different perspectives. The chapter starts with presenting some of the most enduring views on the relevant terminology to come to the conclusion that there is no unified approach to notions such as register, genre, and text type. Next, specialized varieties have been given some attention. Two approaches have been highlighted – the one that focuses on the analysis of linguistic patterns across specialized registers and the other one centred on identifying communicative needs of particular speech communities. It is against this background that the notions of LSP (Language for Special Purposes) and Business English have been considered.

Chapter 4 has been intended as a brief outline of the major concepts, principles and practices underlying the creation and use of language corpora. It also contains some indications of how the resources and techniques used to investigate general language can be applied in the field of LSP. The chapter also touches upon the issues of defining and classifying different types of corpora, as well as pointing out the scope and strengths of corpus-based methods as compared to more traditional approaches. Furthermore, some basic computer tech-

niques for language-data processing such as frequency lists, concordancing, annotation have been briefly dealt with in order to point out their role in reducing the work-load that typically accompanies manual manipulation of language data. Finally, some attention has been given to the criteria that are typically applied in compilation of general purpose corpora with an indication of the significance they have for the fields of LSP.

Chapter 5 specifies the goals of the empirical part of the study and outlines the methodological procedures adopted in order to accomplish those goals. It also includes a subsection outlining the process of corpus compilation and discusses the major components of this corpus, which has been specially designed for the present research.

Chapter 6 is devoted to a detailed presentation and analysis of the relevant linguistic material as drawn from the English-language part of the corpus. The chapter includes eight different sections, each dealing with a different source domain metaphorically extended onto the target domain of *successful* and/ or *poor business* (*economic*) *performance*. The sections abound with corpus examples illustrating the ways in which particular experiential domains are exploited under metaphorization. Most importantly, the chapter discusses the mechanisms behind the cross-domain mappings identified in the corpus data. Also, it takes a look at the lexicographical representations of the metaphorical meanings with a view to determining the degree of their cognitive entrenchment.

Chapter 7 has been constructed by analogy to chapter six, with the exception that it covers Polish-language data.

Chapter 8 makes comparative observations and presents quantitative (frequency) data. That is, it brings into focus the differences and similarities in the metaphorical structure of the target domains in focus, as unveiled by the English and Polish-language corpora. In addition to contrasting the findings of the qualitative research presented in the two preceding chapters, chapter eight deals in some detail with the quantitative data shedding light on the degree of cognitive salience and productivity of particular mappings.

Chapter 9 recapitulates all the major observations made in the analytical chapters and points to some future directions in metaphor research.

2. From Aristotle to Lakoff & Johnson: The theory of metaphor

2.1. Introduction

The field of metaphor research has its roots in antiquity, deriving from the work of the philosopher-scientist Aristotle, whose views on what metaphor is survived in different shapes and forms for centuries winning the hearts of numerous theorists and researches in the field. The relevant literature tends to credit Aristotle with the so-called *reductionist* standpoint according to which metaphorical meanings can be easily traced back to their literal counterparts. Viewed from this perspective, metaphor turns out to be no more than an ornamental frill employed by poets or rhetoricians in order to impress or persuade their audience. It was only in 1980 that this view of metaphor was challenged by two American researchers George Lakoff and Mark Johnson. In their seminal study *Metaphors We Live By* Lakoff and Johnson questioned many aspects of the traditional, Aristotelian conception, putting forth a new theory that has become known as a cognitive linguistic theory of metaphor or conceptual theory of metaphor. The cognitive theory of metaphor has exerted an enormous impact on metaphor research since those early days and still provides the main point of reference in researching metaphorical structures across different languages and cultures.

The present chapter presents an outline of the major tenets of the cognitive theory of metaphor as first spelled out in *Metaphors We Live By* and elaborated on in a number of other publications. However, this is preceded by a brief account of Aristotle's conception aimed at finding the main differences with the cognitive theory, but also at finding the cognitive traces, which, as we believe, are hidden in his *Rhetoric*. Also, the theories that prepared the ground for the emergence of the cognitive theory, i.e. Black's interaction theory as well as Reddy's article on the *Conduit Metaphor* will be given some attention, along with the general philosophical and psychological background of the cognitive linguistic approach to language. Finally, the more recent extension of the conceptual theory of metaphor, that is *conceptual blending* will be dealt with in passing.

2.2. Aristotle on metaphor in *Poetics* and *Rhetoric*

As Aristotle believes all metaphors fall into one of the four categories:

> Metaphor is the application of an alien name by transference either from genus to species, or from species to genus, or from species to species, or by analogy, that is, proportion (Poetics: Part 21; translation by Butcher, in Nahm, 1950: 28).[1]

In brief, Aristotle reduces the process of metaphor creation to substituting one word with another, more colorful or vivid one. This transfer may proceed in four different ways – a more specific word can be substituted by a more general one, or conversely, a more general term

[1] All the references to Aristotle's *Poetics* are from the translation by Butcher in Nahm (1950).

may stand for a more specific one. Furthermore, the words marked by the same degree of specificity can replace one another. Finally, metaphor coinage might involve analogy (proportion), which, in Aristotle's words, is "when the second term is to the first as the fourth to the third" (Poetics: Part 21). In other words, we deal here with the classic proportional analogy A/C = B/D, in which the term combination A: D is allowed to stand for term C, and the combination B: C for the term A. These four types of transfer are illustrated with the following examples (Nahm, 1950):

- genius to species – 'There lies my ship' ('lying at anchor' is more specific than the more generic notion of 'lying'),
- species to genus – 'Verily ten thousand noble deeds hath Odysseus wrought' ('ten thousand deeds' is more specific than 'a large number'),
- species to species – 'With blade of bronze drew away the life and cleft the water with the vessel of unyielding bronze' ('to draw away' and 'to cleave' are each sibling species of the genus 'taking away'),
- analogy – since old age is to life as evening is to day, one can say that 'old age is the evening of life'.

What seems to follow from Aristotle's *Poetics* is that metaphors are neither indispensable nor systematic tools for communication. Quite to the contrary, being seen as simple ontological manipulations, they have no cognitive value and their major function is that of making speech or writing 'more pleasing' or ornamental. On this view, metaphorical language is identified with strange, unusual combinations of words, often violating linguistic rules and having nothing or, at best, very little to do with everyday communication. It is against this background that Aristotle discusses the relationship between metaphorical language and genius, making his most famous statement:

> But the greatest thing by far is to have a command of metaphor. This alone cannot be imparted by another; it is the mark of genus – for to make a good metaphor implies an eye for resemblance (Poetics: Part 22, translated by Butcher, Nahm, 1950: 31).

Thus, Aristotle conceived of metaphor as a mark of genius, an innate ability which not everybody is endowed with. This view of metaphor as a decorative linguistic extra, appropriate for the purposes of poets seems to be subject to some modification in *Rhetoric* (Book 3, 10), which is concerned primarily with public oratory as opposed to the literary language focused on in *Poetics*. It is in *Rhetoric* that Aristotle brings to light the pedagogical value of metaphors stating that:

> We learn above all from metaphors. When Homer compares old age to wheat stubble, he makes us realize and understand that both wheat stubble and old age belong to the genus of things that have lost their vigor (…). We are attracted by those things which we understand as soon as they are said or very soon afterwards, even though we had no knowledge of them before, for then there is a learning process or something very like it, but in the case of the obvious or the unintelligible there is no learning at any time (Rhetoric, Book 3, 10; Grube, 1958: 89).[2]

[2] References to Aristotle's *Rhetoric* are from G.M. Grube's (1958) translation.

As Aristotle claims, well-structured metaphors convey the truth about the world by "bringing things vividly before the eyes" (Rhetoric, Book 3, 10; Grube, 1958: 92) and thereby facilitate the process of our learning new things. This statement, in turn, seems to ascribe a cognitive function to metaphors which are apparently elevated to the role of vehicles for understanding. As a result, *Poetics* and *Rhetoric* present a somewhat conflicting view of metaphor. On the one hand, Aristotle describes metaphors in rather simplistic ontological terms, but on the other, highlights their cognitive status by claiming that they are not an empty word play, but an integral and indispensable part of communication and learning.

2.3. Max Black – the interaction theory

More explicit references to the cognitive status of metaphors can be traced in Black's classic now article *More about metaphor*, where the author's cognitive orientation has been articulated quite openly:

> My interest in this paper is particularly directed toward the "cognitive aspects" of certain metaphors, whether in science, philosophy, theology, or ordinary life, and their power to present in a distinctive and irreplaceable way, insights into "how things are" (Black, 1979: 21).

Black describes metaphor as consisting in two subjects, that is *principal* and *subsidiary*, in his subsequent works referred to as *primary* and *secondary*, respectively. The focal point here is the interaction between those two subjects defined by Black as:

> "Projecting upon" the primary subject a set of associated implications, comprised in the implicative complex, that are predictable of the secondary subject (Black, 1979: 28).

Black elaborates on his key notion of implicative complex describing it as a term derived from the more transparent term he used in his article *Metaphor* (1962), that is *a system of associated commonplaces*. What Black emphasizes is that the secondary subject is not to be associated with one particular thing but with "a set of current opinions shared by members of a certain speech community" (1979: 29). What is more, the primary subject must be seen in a similar fashion. To illustrate his claims Black presents the metaphor MARRIAGE IS A ZERO-SUM GAME. Thus, what is meant as an implicative complex of the primary subject in this particular case is that a game is a contest, typically there are two opponents, only one of whom wins always at the expense of the other, and so forth. As for the primary subject, the corresponding system depends on our interpretation of contest, opponents, and winning. On Black's view 'the associated commonplaces' include the assumption that a marriage involves struggle, the spouses are the contestants, only one of whom gains the reward they compete for (e.g., power, money, satisfaction).

As far as the 'projection' mechanism is concerned, Black states that only some features of the primary subject are selected, emphasized and organized, which is the job of 'the maker of a metaphorical statement.' Also, the choice of features is determined by the structure of the

secondary subject whose features must remain isomorphic with those of the secondary subject:

> The presence of the primary subject incites the hearer to select some of the secondary subject's properties; and invites him to construct a parallel implication-complex that can fit a primary subject; and reciprocally induces parallel changes in the secondary subject (Black, 1979: 29).

What follows from the above specification is that there exists an inherent isomorphism between the structure of the secondary and primary subject.[3] The identification of those isomorphic elements seems to be the major task that metaphor makers or hearers are faced up with. Furthermore, Black's notion of the 'parallel implication-complex' implies the emergence of yet another system. Thus, it is evident that for Black the creation of metaphor involves a new conceptual entity. However, the nature of this new quality as well as the mechanism of its origin adds some mystery to Black's theory. This issue has been more explicitly addressed in the following passage.

> I intend to defend the implausible contention that a metaphorical statement can sometimes generate new knowledge or insight by changing relationships between the things designated (the principal and subsidiary subjects). To agree would be to assign a strong cognitive function to certain metaphors; but to disagree is not necessarily to relegate them to some realm of fiction (Black 1979: 39).

With this contention, Black makes an attempt to substantiate his so called 'strong creativity thesis', which credits metaphorical statements with an important cognitive function of enabling "us to see aspects of reality that the metaphor's production helps to constitute" (Black 1979: 39). In short, Black's argumentation is based on a more general assumption that objectivity and subjectivity are not necessarily two incompatible opposites; on the contrary they do interact and metaphorical projection, as Black conceives of it, might serve as the evidence of this interaction. Consequently, Black's answer to the question of the type 'did X exist before it was perceived?' is yes and no. On the one hand, Black does not call into question the existence of objective reality, but on the other hand, he puts forward an equally reasonable thesis that the world is necessarily "a world under a certain description", or "a world seen from a certain perspective" (Black, 1979: 39-40) and some metaphors can create such a perspective. This, in turn, seems to bring Black's interaction theory in line with the key notions of cognitive experiential realism (cf. 2.5.1). Yet, another clear sign of cognitive reasoning that can be traced in Black's article, is the very notion of 'metaphorical though'. Although Black does not provide any definite solutions to the problem of 'what it is to think of A as B', his conclusion as to the question of why such a phenomenon constitutes an essential part of our mental activity is as much simple as illuminating – "because metaphorical thought and utterance sometimes embody insights expressible in no other fashion" (Black, 1979: 34).

[3] This statement of 'inherent isomorphism' between the two subjects brings to mind Lakoff's Invariance Principle.

2.4. Metaphors we live by

Black's illuminating, albeit vague idea that there is much more to metaphor than their ornamental or rhetoric facet has been taken up by Lakoff and Johnson in their classic now volume *Metaphors we live by* (1980). The ideas presented in the volume have proved influential enough to dominate the thinking on metaphor for almost four decades now. The main assumptions of the cognitive theory of metaphor can be summarized as follow:

- metaphors are not a matter of language, they are primarily a matter of thought,
- metaphor is a matter of ordinary rather than extraordinary language,
- metaphors should be seen as mappings from a source conceptual domain, usually more tangible, to a target conceptual domain, which is abstract and therefore less comprehensible,
- metaphors are not random or arbitrary occurrence but form coherent systems in terms of which we conceptualize our experience,
- most metaphors are grounded in systematic correlations within our experience both physical and cultural.

Before proceeding to a more detailed presentation of these assumptions, a quick look is taken at a broader context in which cognitive theory of metaphor emerged, by which I mean cognitive linguistics movement: an approach to language study that began to emerge in the 70s providing an alternative to structural linguistics and to generative approaches, which dominated the linguistic scene at that time.

2.5. Cognitive linguistics

The emergence of cognitive linguistics must be seen in a broader context of what has come to be termed *cognitive science*. The major goals of this multifaceted branch of scientific endeavour have been delineated by Lakoff as follows:

> It seeks detailed answers to such questions as: What is reason? How do we make sense of our experience? What is conceptual system and how is it organized? Do all people use the same conceptual systems? If so, what is that system? If not, exactly what is there that is common to the way all human beings think (Lakoff, 1987: xi).

In brief, cognitive science can be defined a discipline which studies human conceptual system. It must be seen as an interdisciplinary approach which brings together what is known about the mind from many academic disciplines: psychology, linguistics, anthropology, philosophy, and computer science. In the light of cognitive science none of the disciplines mentioned constitutes a self-contained whole. On the contrary, it is the interplay of all or most of them that reveals the true essence of *cognitivism*.[4]

[4] In his volume *Philosophy in the Flesh* (1999), co-authored with M. Johnson, Lakoff makes a distinction between first and second generation Cognitive Science. The former, whose origins are traced back to 1950s and 1960s, is identified with paradigms such as formal logic, generative linguistics, or information processing psychology and is not considered cognitive science proper. The term is reserved for the second generation, which

Cognitive linguistics, one of the many facets of cognitivism, is a field which itself is characterized by a great diversity of methodological assumptions, perspectives adopted and conclusions drawn. What seems to lend some coherence to this multitude of perspectives is a set of common views on the fundamental questions of what language and cognition are. They can be sketched out as follows:

a. Language is a cognitive phenomenon which can be adequately characterized only relative to cognitive processing in general. There is no an autonomous linguistic faculty as maintained by the advocates of generative tradition. On the contrary language is an integral part of human cognition. As such it must be analyzed and described in terms of what we know about other facets of human cognitive ability.
b. Imaginative aspects of reason – metaphor, metonymy and mental imagery are central to language production and comprehension.
c. Reason is inherently embodied, which is to say that our conceptual systems draw largely upon the nature of our bodily and cultural experience. Consequently, linguistic meaning must be considered relative to such physical and cultural *embodiment*.
d. Conceptual as well as linguistic categories show *prototype effect*.
e. Language is a matter of degree, which is to say that "linguistic relationships are not invariably all-or-nothing affairs, nor are linguistic categories always sharply defined and never fuzzy around the edges" (Langacker, 1987: 14). As a result, the traditional dichotomies (e.g. grammar vs. lexicon, literal vs. figurative language, morphology vs. syntax, semantics vs. pragmatics etc.) do not have cognitive and linguistic plausibility.
f. Linguistic meaning is characterized relative to relevant general knowledge structures (variously termed conceptual domains or cognitive models).

The next two sections briefly deal with the philosophical and psychological approaches that provided the background for the emergence and development of cognitive linguistics.

2.5.1. Philosophical background – experiential realism & conceptual embodiment

> Living human life is a philosophical endeavor. Every thought we have, every decision we make, and every act we perform is based upon philosophical assumptions so numerous we couldn't possibly list them all (Lakoff and Johnson, 1999: 9).

Philosophy seems to provide the major conceptual frameworks upon which not only linguistics but most academic disciplines rest. For centuries it was the traditional Anglo-American philosophy with its strong commitment to a priori objectivism and realism that continued to define the context for human intellectual activity of various kinds. The cognitive science called the major tenets of this philosophy into question. It did so, as the advocates of the cognitive approach claim, on the basis of convergent empirical data, that is the data obtained

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began to emerge in the mid1970s. Being a relatively new discipline, cognitive approach does not seem to constitute a finished or formalized theory yet. It is more realistically viewed as evolving conceptual framework, framework that is still a subject to ongoing investigation, verification, and extension.

from diverse empirical domains, linguistics and psychology being the major sources of evidence. What has come in for the strongest criticism are the following 'objectivist' assumptions (cf. Johnson, 1987; Lakoff, 1987; Lakoff and Johnson, 1980; Lakoff and Johnson, 1999):

- the world consists of entities with properties and relations holding among them; this structure exist objectively, that is it is independent of human cognitive capacities,
- categories are defined in terms of necessary and sufficient properties shared by all members and they correspond to natural kind of entities that exist in the world,
- thought is the manipulation of abstract symbols which correspond to entities and categories in the world,
- human conceptual system is independent of cognitive processing,
- imaginative aspects of human cognition such as metaphor, metonymy, mental imagery do not belong to the realm of concepts since they are not capable of corresponding to entities in the world,
- linguistic meaning is based on the capacity of linguistic expressions to correspond to aspects of objectively existing world,
- words have inherent meaning and designate objects by virtue of those meanings,
- meaning and rationality are transcendental – they go beyond the limitations of any particular kind of being, which is to say that that meaningful thought, reason and language are independent of the nature of human organisms.

The main objection raised by cognitive linguists against these 'objectivist' theories concerns the correspondences between concepts and categories of external reality, or rather the lack thereof. As the author of *Women, Fire and Dangerous Things* (1987) claims, there are many categories of the mind and language that are not reflected in categories of the world, e.g. metaphoric and metonymic models which are cognitively real, yet do not seem to have any correlates in the categories of the world. The same might be said about 'radial categories' (cf. Lakoff, 1987) with their extension principles, that is metaphor, metonymy and image schemata which do not fit into the objectivist framework. Yet another counterargument is the existence of concepts with gestalt properties. In the light of cognitive research, concepts characterized by gestalt structure are cognitively simpler than those based on individual parts (cf. image-schemas). This, in turn, is in conflict with objectivist doctrine of atomism according to which *primitive* concepts have no internal structure and are cognitively simpler than complex concepts. Yet, another example of category that cannot be adequately described in terms of objectivist framework is the category of colors. As the empirical research in physiology and anthropology has shown colours are not objectively existing properties of objects. Quite to the contrary, they are a matter of human physiology, cognitive processing of human brains as well as cultural convention. They thus fail to conform to the objectivist doctrine of categories that exist independently of human understanding. This conclusion can be drawn on the basis of an experiment with flashing lights conducted by Barwise and Perry (1984). What the experiment has shown is that when two lights are flashed in quick successions, people see one light, not two. Thus, what one sees is not necessarily a reflection of what actually is there. This, in turn, is in conflict with the conviction that there must be a correlation between aspects of mental reality and the world in its physical dimensions.

These and some other research results led cognitive linguists to call into question the main tenets of the objectivist paradigm. What they have proposed instead is the philosophy of the so called *experiential realism* and *embodied reason* (Lakoff and Johnson, 1999). Its major assumption is that human conceptual system is a product of human experience of different kinds, both physical and cultural. The actual shape of the world is determined by the imposition of various conceptual schemas upon external reality. Consequently, the objectivist *God's eye view* of reality has been discredited as an illusion. On cognitive account, the world is not the way it is but the way it is perceived, understood and experienced by human beings. Lakoff and Johnson (1999), however, make a reservation that the philosophy they subscribe to is by no means to deny the basic realism, that is the existence of the so called objective reality. What they subscribe to is Putnam's *internal realism – a realism from a human point of view*. On this account, there is no *one* privileged and perfect description of reality of the God's eye variety, that is from *external* perspective. What is possible, on Putnam's view, is an *internalist* perspective. It is a perspective that acknowledges that our understanding of the world is based on our being part of it – human beings with their conceptual powers are not passive observers of external reality who take the stance of outsiders; on the contrary, they take an active part in making sense of the world through their embodied experience. Hence, what Lakoff and Johnson (1999) propose is the so called *philosophy in the flesh* as opposed to the *philosophy without flesh* characterizing objectivist paradigm.

2.5.2. Psychological background – the theory of prototypes

Categorization seems to be the central issue for cognitive science for the simple reason that the capacity to categorize is one of the most basic and fundamental human capacities. The traditional view is that categories are based on common properties of their members. This is to say that things belong to the same category if and only if they share certain and necessary properties which are taken as defining the category. However, the validity of such an approach has been severely undermined by a great deal of more recent empirical data, which point to a much more complex basis of this phenomenon.

The earliest reaction against the classical theory of categorization is generally acknowledged to Ludwig Wittgenstein (1953). His classical now example of the category *game* was employed to undermine the traditional belief that categories are defined by common properties of their members. As Wittgenstein pointed out, the members of the game category represent such a diversity that a set of common properties that would define the category cannot be formulated. Nevertheless, they are all perceived as a single, united category. The idea that members of a category might be related to one another in various ways without all members having any properties in common has been termed by Wittgenstein *family resemblances*. Games represent such families – they resemble one another in a variety of ways but there is no single collection of properties that all games share. (e.g. some games involve luck, others skill, there are games where competition counts most but also games where amusement is the priority)

The subject of family resemblances was taken up and developed further by Eleanor Rosch (1973, 1978). Her major contribution is the so called *theory of prototypes* which is

generally recognized by cognitive psychologists as having revolutionized the study of categorization within experimental psychology. In a set of experiments, Rosch set out to show that thought is organized in terms of prototypes. Undermining the classical theory that all members of a given category have equal status, she showed that some members of a category are better examples of that category than others. Those better examples, or in other words, the most representative members of a category have been called "prototypical members". Rosch developed a range of experimental paradigms for investigating a number of categories (colors, physical objects). In each of her experiments the subjects defined certain members of a category as being more representative than others. For example, swallows or robins were considered to be more representative of the category bird than ostriches or penguins. Such asymmetries within particular categories as observed by Rosch have been given the label of *prototype effect.* The notion of prototype effect has proved extremely influential also in the field of language studies shedding some new light on the nature of linguistic categories (cf. radial categories).

2.6. The cognitive theory of metaphor

2.6.1. The conduit metaphor

It seems logical to start our presentation of the major assumptions of the cognitive approach to metaphor with a brief sketch of Reddy's article *The Conduit metaphor* (1979) which is chronologically prior to Lakoff and Johnson's foundational publication, yet gives us a taste of what conceptual metaphors are all about.

The term *conduit metaphor* has been employed by Reddy to account for the way we understand the concept of communication. As has been demonstrated in this article, we tend to conceptualize communication in terms of the containment schema. More specifically, ideas, thoughts, meanings or feelings (put under a generic term of 'repertoire members') are conceived of as objects and linguistic expressions, e.g., words, phrases, sentences (included in the category of the so called 'signals') as containers. In the simplest terms, the ideas are put into words and transferred through a kind of a conduit, to the hearer or reader, who extracts the ideas from the words. Reddy illustrates his idea of the *conduit metaphor* with numerous examples. Here are but a few of them:

> It's difficult to put my ideas into words
> You cannot simply staff ideas into a sentence any old way!
> Your words seem rather hollow
> I feel some responsibility to get these ideas out where they can do some good.
> (Reddy, 1979: 311-316)

In addition to this so called 'major' version of the metaphor, in which repertoire members are always put into a container, Reddy comes up with the 'minor' framework, in which the container aspect does not feature and ideas or feelings " (…) flow, unfettered and completely disembodied, into a kind of ambient space between human heads" (Reddy, 1979: 291). Here are some examples:

> Put those thoughts down on paper before you lose them.
> Mary poured out all of the sorrow she had been holding in for so long.
> That concept has been floating around for decades. (Reddy, 1979: 291)

Reddy's conclusion to his lengthy discussion is not an optimistic one. The author, being fully aware of the prominent position the conduit metaphor occupies in how the process of communication is conceptualized but also realizing its deficiencies, states what follows:

> We have the mistaken, conduit-metaphor influenced view that the more signals we can create, and the more signals we can preserve, the more ideas we "transfer" and "store". We neglect the crucial human ability to reconstruct though patterns on the basis of signals and this ability founders. (…). In the simplest terms, the conduit metaphor lets human ideas slip out of human brains, so that, once you have recording technologies you do not need humans any more (Reddy, 1979: 310).

The idea of the conduit metaphor has been found inadequate by Lakoff and Johnson (1980: 10-12) whose major objection is that the metaphor accounts only for prototypical situations in communication. This criticism, however, has been counteracted by Krzeszowski (1997: 170-176), who proposes a less schematic interpretation of Reddy's framework according to which the key notions, i.e. *object*, *container* and *sending* should be treated as general categories that might be instantiated by a number of subordinate notions. Thus, the category of objects consists in an infinite set of more specific concepts such as tools, weapons, materials and so forth. Similarly, the highly schematic concepts of container and sending can be instantiated by triplets such as box, parcel, pocket/ mailing, selling, or lending, respectively. What Krzeszowski proposes is that such non-schematic interpretation of the metaphor makes it well equipped to account for most communicative situations, including those less prototypical ones. The point, however, is that Reddy's framework does not seem to be in conflict with such a non-schematic approach. It would be a fallacy to assume that notions such as *object*, *container* or *sending* can be at all viewed in ways other than as some general categories to be filled in with some more specific instantiations. Consequently, the objections concerning the limited scope of the conduit metaphor might be dismissed as irrelevant.

Whatever the strengths and the weaknesses of the conduit metaphor we might voice, one thing cannot be denied – Reddy's account marks an important step towards the cognitive approach to metaphor. It is mainly because it breaks with the long-standing conviction that metaphor is primarily a matter of poetic and rhetorical language. The bulk of linguistic material presented by Reddy is the evidence that the opposite is true, namely that metaphorical expressions are very much a part of normal everyday lexicon and not deviant expressions of poetic imagination.

2.6.2. Metaphor, cognition and language

Cognitive approach sees metaphor as a major and indispensable part of our ordinary, conventional way of conceptualizing the world. According to cognitive linguists, metaphors are not merely a matter of language, but first and foremost, a matter of thought and reason and their

major function is that of vehicles for understanding abstract concepts and performing abstract reasoning. As the proponents of cognitive approach reveal in their numerous publications, an unimaginably large number of everyday concepts, from the most basic ones such as time, states, change, causation and purpose to the most sophisticated scientific theories, can only be comprehended via metaphor. The mechanism behind *metaphorical thought* has been defined by Lakoff and Johnson as "understanding and experiencing one kind of thing in terms of another" (1980: 5). Such a perception, in turn, fits in with a more general cognitive theory that nothing is meaningful in itself (cf. 2.5.1). Quite to contrary – things owe their meaning to different types of experience: bodily, environmental, cultural. Most importantly, those patterns which obtain in our physical experience are projected by metaphor onto abstract domains of human experience. More specifically, metaphors tend to be defined as cross-domain conceptual mappings in the course of which one conceptual domain, typically physical or tangible (labeled as source or donor domain), is projected or *mapped* onto another conceptual domain, usually more abstract and thus less clearly delineated in our minds (termed target or recipient domain). Furthermore, the relationships between these two domains tend to be specified in terms of more or less extensive sets of ontological correspondences. By way of illustration, let us look at the well-worn metaphor LOVE IS JOURNEY represented in language by expressions such as: Our relationship has hit a *dead-end street*, Look *how far we've come*, We can't *turn back* now, It's been a *long, bumpy road*, We're *at the crossroads* etc. Thus, a pattern of inferences from the source domain of journey is reflected in the target domain of love. More specifically, the conceptual mapping LOVE IS A JOURNEY involves or consists of correspondences such as: lovers are travelers, lovers' goals are destinations, love relationship is a vehicle, difficulties in the relationship are impediments on the journey, etc. Thus, whenever the term conceptual metaphors is used it stands for a set of correspondences by way of which source domain entities are mapped onto target domain entities.

It follows clearly from the above example that the notion of metaphor should be considered at least at two levels which might be referred to as cognitive and linguistic. Contemporary metaphor theorists typically use the term 'conceptual metaphor', 'metaphorical concepts' or simply 'metaphor' to refer to the former, that is cross-domain mappings in our conceptual systems and the term 'metaphorical expressions' to refer to linguistic manifestations of those underlying mappings. Seen from this perspective, metaphorical expressions perform the important function of allowing us the access to the underlying metaphorical structure of our thought.[5]

2.6.3. Experiential grounding of conceptual metaphors

The essential question to be addressed at this point is the one concerning the ways by which the links between dissimilar conceptual domains are formed, which tends to be referred to as *experiential grounding* of metaphors. The literature in the field (cf. Lakoff 1987, 1993; Lakoff and Johnson, 1980; Lakoff and Johnson, 1999) seems to have given most attention to the so

[5] The literature in the field typically uses mnemonic TARGET DOMAIN IS A SOURCE DOMAIN (e.g. LOVE IS A JOURNAY) to talk about conceptual metaphors whereas metaphorical expressions are simply italicized or underlined.

called *experiential correlations*. One of the most frequently employed examples is the one illustrating the correlation between the vertical elevation of physical entities and an increase in the quantity of those entities. More specifically, if there is a certain amount of liquid in a container and more liquid is added, the level of the liquid rises. Another illustration might be piling things – the more objects we add to a stack, the higher it becomes. As a result, humans frequently experience greater quantity in terms of an increase in vertical elevation. Yet another example might be the natural bond between the experience of *seeing* and *knowing*. It goes without saying that the vast bulk of knowledge we have about the world is gained through vision. The sense of sight, being our most reliable source of information, allows us an unlimited access to information about entities and relationships that hold in the world. Consequently, there is a tendency to conceptualize the notion of knowledge in terms of seeing or sight.

Experiential correlations like the ones just mentioned are ubiquitous in our everyday experience. Due to their recurrent nature, they result in the formation of strong conceptual links between clearly distinguishable and in many ways dissimilar concepts such as *verticality* and *quantity* or *seeing* and *knowing*. This in turn, gives rise to conceptual metaphors MORE IS UP and KNOWING IS SEEING represented in language by an enormous diversity of expressions (e.g. Prices *went up*; Inflation *skyrocketed*; I *see* what you mean or His *perception* of the matter surprised us all).

In addition to correlations in experience, the nature of the conceptual links between distinct domains is traced back to some sort of similarity or resemblance between those domains (Grady et al., 1999; Kövecses, 2002). Kövecses (2002: 72), for example, gives the example of LIFE IS A GAMBLING GAME metaphor and suggests that there is, what he calls "perceived structural similarity" between the source domain of gambling and the target one of life, e.g. we view our actions or decisions as gambles, consequences of those actions are either losing or winning, etc. This account inevitably brings to mind the traditional theories of metaphor based on the assumption that figurative language draws on similarities between entities. There is, however, an essential difference between these two perceptions. Namely, the traditional approach is concerned with tracing preexisting, or in other words, objectively existing similarities between entities whereas the cognitive approach points out that there are resemblances that are *perceived* by humans even if they do not exist in the physical sense (as for example between life and gambling game). Thus, the notion of preexisting similarities is contrasted here with that of resemblances as they arise in the minds of human beings. This, in turn, might lead to the conclusion that "(…) some metaphors are not based on similarity but generate similarities" (Kövecses, 2002: 72).

Although the notion of 'perceived structural similarities' as presented above does not seem to provide us with anything like a complete and convincing account of the processes behind our *understanding one kind of thing in term of another*, yet it reinforces the logical intuition that there is *some kind of* similarity between perceptually distinct entities participating in metaphorical mappings of various kinds. What kind of similarities they are and how they arise in our minds is the area that undoubtedly merits further explorations.

2.6.4. Kinds of metaphors

A mention should be made at this point of different categories of conceptual metaphors as distinguished by Lakoff and Johnson (1980) on the basis of their cognitive function:

- *ontological* metaphors involve understanding abstract experiences (activities, ideas, emotions) in terms of objects and substances. In other words, their cognitive function is that of giving ontological status to abstract concepts. For example, the general conceptual metaphor INFLATION IS AN ENTITY allows us to conceptualize the abstract notion of inflation in terms of what we know about physical entities. As a result, it is possible to say that inflation *is lowering* our standard of living', inflation *is backing us*, or inflation is *taking its toll*. The point is that without the underlying ontological metaphor as mentioned above we would not be able to enter a meaningful relationship with the abstract notion of inflation. As the authors of *Metaphors We Live By* emphasize, the number of ontological metaphors we use is enormous and their role in dealing rationally with the abstract part of our lives cannot be overemphasized. Yet they are "so natural and so pervasive in our thought that they are usually taken as self-evident, direct description of mental phenomena. The fact that they are metaphorical never occurs to most of us" (Lakoff and Johnson, 1980: 28).
- *structural* metaphors are the cases when one complex concept is structured in terms of another complex concept. One of the most frequently cited examples is the conceptual metaphor ARGUMENT IS WAR whereby a range of different aspects associated with the source domain of war is reflected in the target domain of an argument giving rise to a multitude of conventional linguistic expressions such as: Your claims are *indefensible*, He *attacked* every weak point in my argument, His criticism were right *on the target*. It has to be pointed out here that structural concepts, as the name suggests, provide much more conceptual structuring than the ontological ones which function on a more general level of cognitive processing.
- *orientational* (or *spatialisation*) metaphors employ human basic spatial experience (e.g. up, down, front, back, center, periphery) as source domains giving rise to conceptual metaphors such as HAPPY IS UP or SAD IS DOWN. Similarly to ontological metaphors, orientational concepts are marked by an exceptional productivity and diversity of related linguistic expressions, e.g. I'm feeling *up*; My spirits *sank*; We hit *a peak* last year, It's been *downhill* ever since. Orientational metaphors should be seen in a broader context of the so called image-schema metaphors which are briefly dealt with in the next subsection.
- *personifications* whereby we understand nonhuman entities in terms of human motivations or characteristics. It is a general category that covers a wide range of metaphorical expressions, each picking out different aspects of a person. For example, the general concept INFLATION IS A PERSON can be further specified as INFLATION IS AN ADVERSARY giving rise to expressions such as: Our biggest *enemy* right now is inflation; Inflation has *attacked* the foundations of our economy.

2.6.5. Image-schema metaphors

As mentioned in the preceding section, there exists a range of metaphors which employ very general experiential constructs typically referred to as image-schemas (also schemas, or schemata). The notion of image-schema has been elaborated on in some detail by Mark Johnson in his 1987 volume *The Body In The Mind: The Bodily Basis of Meaning, Imagination, and Reason.* Johnson derives his conception of schemata from its original use by I. Kant who understood it as non-propositional structures of imagination. Kant's extensive account of imagination has provided Johnson with some background on the basis of which the following definition has been formulated:

> An image-schema is a recurring, dynamic pattern of our perceptual interactions and motor programs that gives coherence and structure to our experience (Johnson, 1987: xiv).

In his lengthy elaboration of the above statement Johnson (1987) makes the following key-points about image-schemas:

- they are structures that emerge at the level of physical functioning of our bodies (perception, movement),
- they perform the function of structuring and organizing our experience so that we can comprehend and reason about it,
- they are not the same as mental images in that they are more abstract and more general than concrete images, consisting of a small number of parts and relations,
- they are flexible structures that can be "modified to fit many similar, but different, situations that manifest a recurring, underlying structure" (Johnson, 1987: 30).

Let us illustrate these points with some examples. For example, the PATH schema has been described as consisting of three parts: a source point A, a terminal point B, and a force vector moving from A to B ('a relation'). Here is a diagrammatic representation of this pattern:

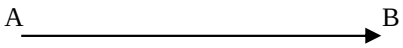

Fig. 2.1. The Path schema

Such a schema is referred to as a dynamic, 'recurrent structure' that is repeatedly employed in seemingly different situations, e.g. walking from one place to another, throwing a ball to someone, giving somebody a present, or even the melting of ice into water. The point is that all of these events are structured by the same underlying schema with the same 'parts' and 'relations'.[6] In a cognitive view, schemas, as the one just described, perform a twofold function – they give coherent structure to our bodily movements and interactions of various kinds,

[6] This dynamic nature of image schemata seems to have important implications for the theory of meaning. In the light of cognitive research, meaning is not merely a static imposition of certain prepositional structures on corresponding aspects of reality. Quite contrary, it is an *evolving process* (Johnson, 1987), which is to say that it is constantly created rather than superimposed by an external force. Viewed from this angle, human experience in its most basic form lies at the heart of the process of meaning creation.

but they also tend to be projected metaphorically onto abstract domains of understanding, which constitutes the essence of conceptual metaphors as dealt with in the preceding sections.

A mention should be also made here of other image-schemas which are often utilized in metaphorical mappings of different kinds. They include structures labeled as UP/ DOWN, FRONT/BACK, CONTAINER, PART/WHOLE, CENTER/PERIPHERY, CONTACT, LINK, BALANCE. As can be seen, most of these schemas are bipolar. It should be noted that this bivalent structure of image-schemas tends to be granted axiological status. In other words one of the poles is referred to as 'plus' (positive) and the other as minus (negative). This conception is traced back to a range of experiential correlations associated with particular schemata. To give an example, UP orientation tends to correlate with positively loaded experiences such as growth, erect posture or state of physical well-being. DOWN spatial orientation, on the other hand, might be associated with horizontal posture which we assume when we are ill or when we die, which, in turn gives rise to the minus load typically assigned to DOWN image-schema (for a discussion of the axiological parameter of image-schema see Krzeszowski, 1997: 108-13).

2.6.6. Dead vs. conventional metaphors and conventional vs. novel metaphors

An objection one might voice is that the notion of conventional metaphors as used by cognitive linguists is a substitute for that of dead metaphors, that is expressions that once were metaphorical but have become frozen into literal expressions. Such a view has been, however, strongly opposed by Lakoff and Johnson, who claim that the metaphors they deal with are "alive in the most fundamental sense: they are metaphors we live by. The fact that they are conventionally fixed within the lexicon of English makes them no less alive" (Lakoff and Johnson, 1980: 55). The authors of *Metaphors We Live B*y associate the notion of metaphors 'being alive' with their systematic and productive nature, which is to say that a single conceptual metaphor typically gives rise to a range of different linguistic expressions. Dead metaphors, on the other hand, are identified with isolated, idiosyncratic instances such as 'foot of the mountain'. On Lakoff and Johnson's account the notion of 'foot' represents a single, idiosyncratic instantiation of MOUNTAIN IS PERSON metaphor in that no other body parts (e.g. shoulders, head etc.) are employed in the mapping (Lakoff and Johnson, 1980: 54). The issue of *dead* and *live* metaphors has been further addressed by Lakoff and Johnson in their 1999 publication *Philosophy In The Flesh*, where a diachronic side of this problem is brought to light. So dead metaphors are described there as linguistic expressions that became a part of language a long time ago as a product of once active conceptual metaphor. Subsequently, the conceptual metaphor ceased to exist and the expressions preserved only the target domain (that is metaphorical) meaning. One of the examples the authors employ to illustrate this point is the word *pedigree* which comes from French *ped de gris* (foot of a grouse). The word derived its meaning from image metaphor in which the image of a grouse's foot was mapped onto the family tree diagram, which had the same general shape. The family tree became to be known as a *ped de gris* and came to be spelled *pedigree*. Nowadays, the grouse's foot has ceased to exist as a source domain and thus a live part of our conceptual system. Pedigree thus lost its source-domain sense – a grouse's foot. All that has remained is the *family-tree* mean-

ing, the grouse's foot being no longer called by English speakers a *ped de gris* (cf. Lakoff and Johnson, 1999: 124-125).[7] On this account, cases like the one just described are distinguished from instantiations of various conceptual metaphors such as LOVE IS A JOURNEY, where both the target and the source domains are cognitively real and even keep producing more examples of new metaphorical expressions. It is precisely this generative nature of metaphorical concepts that serves as an important distinguishing criterion while arguing for their cognitive status.

The aspect of productivity of conceptual mappings has been also employed to account for, what Lakoff terms, *novel* metaphors which are described as extensions of conventional metaphors. One of the examples might be the song lyric "We are driving in the fast lane on the freeway of love" (Lakoff, 1993: 210). Despite not being conventionally fixed in the lexicon, this phrase can be easily comprehended on the basis of its association with the deeply entrenched conceptual metaphor LOVE IS A JOURNEY.

In addition to novel extensions of conventional metaphors, Lakoff distinguishes the category of *image*, or *one-shot* metaphors, which arise when one conventional image is mapped onto another, as in the well-worn example "My wife … whose waist is an hourglass" (Lakoff, 1993: 229). Given that conventional images are very specific and rich in detail, the likelihood of their replication and thus becoming conventional part of our lexicon is minimal and this is precisely what makes *image* metaphors *one-shot* metaphors.

2.6.7. The Invariance Principle

In his 1993 article *The Contemporary Theory of Metaphor*, Lakoff specifies the nature of conceptual mappings by means of what he terms the Invariance Principle according to which:

> Metaphorical mapping preserves the cognitive typology (that is, the image-schematic structure) of the source domain in a way consistent with the inherent structure of the target domain (Lakoff, 1993: 215).

The major function of the Invariance Principle is that of ensuring that the ontological correspondences between the source and target domain are preserved under metaphorization in such a way that the structure of the target domain is not violated. One of the examples employed by Lakoff to illustrate this point is CLASSICAL CATEGORIES ARE CONTAINERS metaphor, which allows us to map the logic of containers onto the logic of categories. More specifically, the classical syllogism "If X is in category A, and category A is in category B, then X is in category B" is derived from the cognitive topology of containers, which is of the form: when an object X is in container A, and container A is in container B, then X is also in container B. Other examples that show the Invariance Principle at work might be the expressions instantiating ACTIONS ARE TRANSFERS conceptual metaphor such as 'give someone a kick', or 'give someone information'. As Lakoff explicates, the Invariance Principle allows us

[7] The authors of *Philosophy in the Flesh* put emphasis on the limited number of dead metaphors claiming that "it takes some effort to come up with such cases" (Lakoff and Johnson, 1999: 125).

to understand why someone who *is given a kick* does not *have* it and why someone who gives information does not *lose* it. Under Lakoff's explanation it is our knowledge of the target domain of actions that limits what can be mapped. More specifically, we know that actions do not exist after they take place, which, in turn, limits the mapping of *possessing* or *losing* inferences inherent in the logic of the source domain onto the target domain of actions. These and other examples make Lakoff arrive at an optimistic conclusion that "this general principle explains a large number of previously mysterious limitations on metaphorical mappings" (Lakoff, 1993: 216).[8]

The Invariance Principle has been elaborated on by Krzeszowski (1997) who has extended Lakoff's formulation so as to account for the axiological aspect of metaphorically structured concepts:

> A given configuration of PLUS-MINUS poles in the preconceptual image schemata from which a particular concept arises is preserved in the arising concept, whether directly meaningful or metaphorically extended (Krzeszowski, 1997: 161).

2.6.8. Metonymy

The four major types of metaphorical concepts as listed in section 2.6.4 are typically supplemented with the category of metonymy – the cases when one entity is used to refer to another that is related to it, as in Lakoff and Johnson's (1980) picturesque example 'The ham sandwich is waiting for his check' (where the ham sandwich stands for the person who ordered the sandwich).

Synecdoche, which brings into focus *part for the whole* relationship, has been classified as a subtype of metonymy and documented with numerous examples, e.g., We need a couple of strong *bodies* for our teams (bodies standing for people), or I've a new *set of wheels* (set of wheels standing for the whole car) (cf. Lakoff and Johnson, 1980: 36).

Metaphor and metonymy are consistently treated by Lakoff and Johnson as related but fairly distinguishable concepts. The former is described as a way of conceiving one thing in terms of another and it is typically assigned the elevated function of a vehicle for understanding. Metonymy, on the other hand, is described as having a primarily referential function, "that is, it allows us to use one entity to *stand for* another" (Lakoff and Johnson, 1980: 36).[9] However, the authors of *Metaphors We Live By* make a reservation, that in addition to this major referential role, metonymies can also serve the function of providing understanding in certain contexts. One of the examples illustrating this point might be the statement '*The Times* hasn't arrived at the conference yet' where *the Times* stands for *something more* than some reporter, namely the use of the INSTITUTION FOR PEOPLE metonymy allows us to grasp the

[8] It should be observed here that the Invariance Principle has come in for some criticism in the center of which we find the terminological aspect, namely the imprecision with which the key notions – *cognitive topology of the source domain* and *inherent structure of the target domain* – are dealt with by Lakoff (for an overview of this criticism see Libura 2000: 63-66).

[9] As can be seen, metonymies typically make use of the preposition *for*, instead of the copula *is* characterizing metaphorical concepts.

importance of the institution the reporter represents (Lakoff and Johnson, 1980: 35).This, in turn, testifies to the important role metonymy plays in the creation of meaning.

It should be concluded here that the most crucial difference between metaphor and metonymy seems to lie in that the former involves two distinct conceptual domains whereas the latter occurs within a single domain.

2.6.8.1. Goossens on metaphtonymy

According to Goossens, there are cases in which the distinction between metonymy and metaphor can hardly be made as these two are closely intertwined (cf. Goossens., 1995: 158-174). The instances of such interactions have been termed by Goossens *metaphtonymy* and explored within a database of figurative expressions associated with the domain of linguistic action. This investigation has led Goossens to distinguish some general categories of metaphtonymy which have been labeled as *metaphor from metonymy* and *metonymy within metaphor*. The former has been described as the cases where there is a possibility for double interpretation, that is a given expression can be seen as either metaphor or metonymy. In other words, the two domains (donor and target) can be conceptualized as joined together on some occasions (metonymy) and as being dissociated on others (metaphor). The examples illustrating this pattern come from the source domain of non-linguistic human sound. One of them might be 'Oh, dear', she giggled, I'd quite forgotten'. On Goossens' view, one interpretation of this statement is that she said this *while* giggling, in which case we have to do with a synecdochic relationship – *part for the whole*, hence a metonymy comes into play. The other possibility is *as if* giggling interpretation, in which case we have to do with metaphoric reading. In general terms, *metaphor from metonymy* pattern involves two distinct domains, hence we get metaphors, yet with the accompanying awareness of their metonymic origins. In the case of Goossens' corpus this means that both the non-linguistic and the linguistic action readings are possible, the metonymic reading being the basis for the metaphorical use. Goossens (1995) attaches the following visualization of *the metaphor from metonymy* (p. 165):

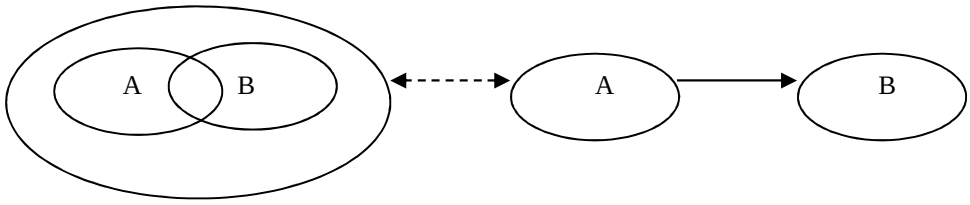

Fig. 2.2. Metaphtonymy: the metaphor from metonymy (Goossens 1995)

Metonymy within metaphor, on the other hand, has been described as occurring when "a metonymically used entity is embedded in a (complex) metaphorical expression" (Goossens, 1995: 172). More precisely, this pattern involves a shared element, that is the entity which functions both in the target and in the source domain. The diagrammatic representation of this pattern is as follows (Goossens, 1995: 170):

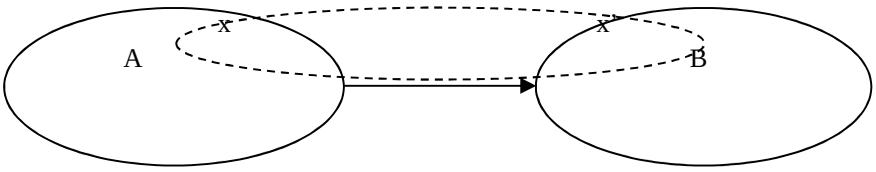

Fig. 2.3. Metaphtonymy: Metonymy within metaphor (Goossens, 1995)

The shared item has been represented as x – differentiated as x and x' in the recipient and target domain respectively. The linguistic instantiation of this pattern include expressions such as: 'bite one's tongue off' (be sorry for what one has just said), or 'shoot one's mouth off' (talk foolishly about what one does not know about or should not talk about). In the former example tongue can be interpreted literally in the donor domain in terms of a painful self-punishment, however, it is rather unlikely interpretation. On Goossens' account, when mapped onto the target domain of linguistic action, the expression comes to mean 'deprive oneself of one's ability to speak'. Under such interpretation tongue stands metonymically for the speech faculty as a whole, which entails the dictionary definition 'be sorry for what one has just said'. In the latter example foolish or uncontrolled use of firearms is mapped onto the target domain of linguistic action. Mouth is reinterpreted as having properties of a gun and hence undergoes metaphorization in the target domain. In the recipient domain, on the other hand, mouth is used metonymically for speech faculty. Consequently, the general pattern that Goossens tries to draw our attention to is that the shared element functions metonymically in the target domain only; in the donor domain it is interpreted either literally or metaphorically.

2.6.9. Neural processing and metaphor

Cognitive scientists do not seem to be content with the findings on the nature of metaphors as they are manifested in thought and language. They are equally interested in neural aspects of human brain that lie behind the mechanism of metaphorical projections. In their attempt to account for such a mechanism Lakoff and Johnson (1999: 47-55) turn to the so called theory of *conflation*. The conflation theory assumes that conceptual metaphors arise in two stages – conflation and differentiation. As the investigations into neural aspects of human brain show, young children do not distinguish between sensorimotor and nonsensorimotor experience (the latter being termed by Lakoff and Johnson as 'subjective experience'). They treat these two as a unified whole when they occur together. For example, the experience of affection is typically associated with the warmth of being held in the mother's arms. The child does not distinguish between these two different domains as he/she experiences them in his or her early stages of life. It is only at the further stages of development that the child is able to separate sensorimotor and more abstract types of experience, the former being perceived as the source domain and the latter as the target domain. The important point, however, is that already during the conflation stage neural connections are established across the neural networks that define different conceptual domains. These connections are permanent and they persist throughout the subsequent stages of a person's life resulting in metaphorical mappings of dif-

ferent kinds. For example, the neural connection between the domain of affection and warmth of being held as described above results in linguistic expressions such as *warm smile* or *close friend* which enter a child's lexicon much later than the physical concepts of warmth or closeness. The important point is that metaphorical extensions of this kind are possible only because permanent cross-domain connections develop in our neural systems through mundane everyday experience early in childhood.

Yet, another theory that Lakoff and Johnson fall back on is Srini Narayanan's *neural theory of metaphor* which views metaphorical process as a sequence of neural activations of the following kind:

> (…) some sequences of neural activations, A, result in further neural activation, B. If B is connected to a neuronal cluster, C, in the network that characterizes another conceptual domain, then B can activate C. In the theory, this constitutes a metaphorical entailment; C is metaphorically linked to B, since it is another conceptual domain; therefore the activation of C is a metaphorical entailment (Lakoff and Johnson, 1999: 47).

Narayanan (1997) also specifies the direction of the activation which is always from the sensorimotor domain to the domain of subjective and thus more abstract experience. The theory assumes that this one-way flow of activation comes as a result of the different degree of neural complexity that characterizes sensorimotor and non-sensorimotor domains, the former having many more inferential connections, and therefore a greater inferential capacity than the latter. As a consequence metaphorical projections are also one-way phenomena, the mapping being from the source to the target. For example, the conceptual metaphor MORE IS UP allows for reasoning about quantity in terms of verticality. The reverse, however, is not true – we do not reason about verticality in terms of quantity. These and some other findings of neural science have led Lakoff and Johnson (1999) to formulate yet another definition of metaphor which states what follows :

> (…) metaphors are neural connections learned by coactivation. They extend across parts of the brain between areas dedicated to sensorimotor experience and the areas dedicated to subjective experience. The greater inferential complexity of the sensory and motor domains gives metaphors an asymmetric character, with inference flowing in one direction only (Lakoff and Johnson, 1999: 57).

2.7. Fauconnier & Turner's theory of blended spaces

Another contribution to the theory of metaphor is the framework proposed by Fauconnier and Turner (1994, 1998) which tends to be referred to as the *theory of blending* or *conceptual integration*. This framework shares many of the important aspects of the conceptual metaphor theory, as described in the sections above. For example, both approaches highlight conceptual rather than purely linguistic status of metaphors and both treat metaphors as systematic projections of imagery and inferential structure between different cognitive domains. The most important innovation introduced by Fauconnier and Turner, is *many-space* conception of metaphorical mappings instead of the *two-domain* model as proposed by Lakoff and Johnson. Fauconnier and Turner's main idea is that metaphors involve a complex of mappings with

multiple spaces in conceptual integration networks. To see how the blending theory works, let us consider briefly the well-worn metaphor 'The surgeon is a butcher' (cf. Grady et al., 1999: 103-107). If we look at this metaphor in terms of the direct projections from the source domain of butchery onto the target domain of surgery, we end up with a series of correlations such as 'a butcher' and 'a surgeon', 'animal' and 'patient', 'cleaver' and 'scalpel', and so forth. The deficiency of such an approach, as the proponents of the conceptual blending theory maintain, is that it does not address the fundamental issue of the metaphor's meaning, namely that the surgeon is *incompetent* as this inference cannot be traced back to the notion of butcher (who might be highly competent at what he does). Consequently, Fauconnier and Turner propose a four-space model to account for the complexities of metaphorical meanings. In their view, metaphorical projections involve the activation of two 'input' spaces, which roughly correspond to Lakoff's source and target domains, as well as the so called 'blended' and 'generic' spaces. The mapping proceeds in such a way that the structures from the two inputs combine to produce an independent blended space. This happens under the structural constraints of the 'generic' space, which contains structure shared by the two input spaces.

To gain a better understanding of this complex mapping, let us look back at our example. Thus, from the source input (butchery) the blend inherits the conceptualization of the job of a butcher (e.g. the activities he performs on animals) and from the target input (surgery) the identities of the surgeon and patient and perhaps some details associated with the place, that is operating theatre. What the two inputs have in common is the use of a sharp object to perform a procedure on some other being, which constitutes the content of the generic space (which performs a coordinating function here). So when projecting the content of the inputs into the blend, we end up with an image of a butcher in an operating room, which in turn, brings to mind the target notion of incompetence.

What Fauconnier and Turner put emphasis on is that the juxtaposition of the input contents leads to the emergence of a new quality within the blended space and it is precisely this new property that gives us a conceptual handle on the surface meaning of metaphorical expressions.

Furthermore, Fauconnier and Turner (1998) lay out five 'optimality principles' of conceptual blending – constraints that delimit what it means for a conceptual integration network to be conceptually well-formed.[10] These are:

- The *integration constraint* which states that blended elements should be readily manipulated as single conceptual units. In other words, the elements in the blended space should form a well-integrated scene;
- The *web* constraint which insures that the connections between the newly blended elements and their original inputs are preserved;
- The *unpacking* constrain which states that one who comprehends the emergent property of a blend should be able to trace it back to constituent spaces and connections;
- The *topology* constraint which assumes that elements in the blend should participate in the same sorts of relations as their counterparts in the inputs;

[10] Optimality principles as put forth by Fauconnier and Turner seem to serve the same function as Lakoff's Invariance Principle.

– The *good reason* constraint which ensures that concepts participating in the blend can be granted significance or relevance by virtue of their connection to other elements of the blend.

It should be concluded here that while some researchers consider Fauconnier's conceptual blending and Lakoff's two-space perspective on metaphor as competing frameworks (e.g. Coulson, 2000), there are also those who see some potential value in treating them as two complementary approaches. Grady et al. (1999), for example, concluding their lengthy discussion of the relationships between these two conceptions state what follows:

> If we establish that the findings of CMT [cognitive metaphor theory] and BT [blending theory][11] are consistent, the potential rewards are significant, since this allows us to unify two streams of research into a more general and comprehensive treatment of linguistic and conceptual phenomena (Grady et al., 1999:123).[12]

[11] parentheses are mine

[12] For a more in-depth comparison of conceptual metaphor theory and the blending theory see Grady et al. (1999: 101-124).

3. Linguistic variation and Language for Specific Purposes

> *All the diverse areas of human activity involve the use of language. Quite understandably, the nature of forms of this use are just as diverse as are the areas of human activity…*
> (Bakhtin 1986: 60)

3.1. Introduction

Variability is an inherent feature of natural languages. Far from being monolithic entities, all languages comprise many varieties. Most of this variation is highly systematic, which is to say that language users make linguistic choices depending on a number of non-linguistic factors.

A broad distinction is made between *user* and *use* related varieties. The former category embraces a range of dialects both geographic and social. The latter, on the other hand, is concerned with particular situational context or communicative purpose and is typically referred to as register. Since dialectal differences have no relevance to the present discussion, in the subsections to follow our major focus will be on varieties associated with speaker's purpose in communication and the production circumstances.[13]

It must be pointed out in this introductory section that there exists a broad range of terms associated with the topic of linguistic variation and there seems to be no unified approach to defining those terms. Some of those key terms such as register, genre, and text type will be briefly sketched out in the present chapter, with an indication of the theories they refer to and the significance they have for the field of Language for Specific Purposes (henceforth LSP) and English for Business Purposes (henceforth ESP) in particular.

3.2. Register, genre and text type

As Biber (1988:7) notes "text types differ from registers in that they are defined in linguistic rather than situational terms." Consequently, a particular register might embrace a number of different text types that exhibit specific linguistic patterns. Registers tend to be defined in terms of three major constituent components, that is field (topic), mode (written, or spoken) and tenor (formal to informal). They are briefly dealt with below (cf. Halliday and Hasan, 1990).

- *Field (or province)* is concerned with the subject matter of a communicative event. It can range from everyday conversations to highly specialized topics. The latter form of communication, typically referred to as technical registers, is inextricably linked

[13] The Prague School of Linguistics with their functional approach to language description seems to be the first to have put special emphasis on factors, other than geographical that can be directly related to the large variety of linguistic behavior.

to the speaker's or writer's education or experience of particular specialist fields. It must be noted, however, that there is no agreement on the number and scope of those specialized fields. Those most commonly referred to include: science and technology, medicine, law, business and economics. These, in turn, might be further subdivided into a range of even more specialized areas (e.g., genetic engineering, zoology, management).

– *Personal tenor* (status or style) refers to the formality of any given piece of language, which may range from formal through informal and colloquial to slang. Formality choices are often determined by the type of relationship between the sender and recipient. In essence, the closer the relationship, the less formal the language used. Conversely, the more distant the personal relationship, the more formal is the tenor likely to be. It should be noted here that there is some controversy as to the number of stylistic levels to be distinguished and the classification of linguistic items as belonging to one of them. Consequently, such classifications are done largely on intuitive basis.[14] It should be also pointed out that most of the language used is stylistically neutral, thus none of the tenor labels can be attached to them. This seems to be the case with the bulk of LSP writing or speech whose style is typically neutral and unemotional. Yet another point is that LSP communication can take place at different levels of 'specialization', which also exerts some influence on the style adopted. Thus, learned/ research journals written by experts and aimed at experts in a given field, popular science publications aimed at semi-experts and finally special interest columns in general newspapers and magazines aimed at non-experts are all likely to represent some stylistic variation (cf. section 3.4).
– As far as *mode* (*medium*) is concerned, a broad distinction is made between speech and writing. While the difference between these two modes seems to be quite well accounted for with regard to language for general purposes (LGP), the major focus of LSP research has been on written texts. The main reason for this is that sufficient quantities of spoken data are difficult to obtain. As a result, there are fields of LSP where research on spoken form is so scarce that no identifiable core language can be distinguished.

The notion of *genre*, like most technical terms related to linguistic variation, has various interpretations. While for some writers it seems to be the same as text type, for others it seems to imply much more. Swales (1981), for example, goes beyond the popular practice of equating genre with text type and defines it as:

[14] Strevens (1964: 29), for examples, discusses five-term model of personal tenor, which has been illustrated as follows:

Frozen	Visitors should make their way at once to the upper floor by way of the staircase
Formal	Visitors should go up the stairs at once
Consultative	Would you mind going upstairs, right away, please.
Casual	Time you all went upstairs, now.
Intimate	Up you go, chaps.

> (…) more or less standardized communicative event with a goal or set of goals mutually understood by the participants in the event and occurring within a functional rather than a personal or social setting (p. 10).

This definition was further developed when Swales introduced the concept of *discourse community*. Six characteristics were presented to define the concept. Thus, the members of a discourse community "have common public goals", and "mechanisms of intercommunication", "they use their participatory mechanisms to provide information and feedback", "utilize one or more genres". In addition they "have acquired some specific lexis", and have a "threshold level of members with a suitable degree of relevant content and discourse expertise" (Swales, 1990: 21-27). This extended definition clearly suggests that for Swales genre involves not only text type but also the role of the text in the community which produces it. It implies thus some study of institutional culture.

Yet another point is that the notion of genre analysis tends to be associated with that of discourse analysis. The overlapping nature of these two terms has been recognized by many language researches. Dudley-Evans and St. John (1998), for example, perceive discourse analysis as an umbrella term stressing the role of genre analysis as its essential component.

Finally, it should be emphasized that the border lines between registers, text types or genres tend to be fuzzy around the edges and the researches in the field are far from reaching a consensus on the use and definitions of these terms. This, in turn, seems to corroborate Biber's (1998) conviction that:

> In practice it is difficult to decipher the empirical correlates of these supposedly discrete categories, or to determine whether a particular variety should be classified as a register, a genre, or some other text category (p. 9).

3.3. Special language or language for special purposes?

Terms such as LSP, *sublanguage* or *technolect* tend to be used interchangeably in the relevant literature to refer to roughly the same phenomenon, namely the language as it is used in different areas of specialized fields of knowledge. Their emergence and status is thus inextricably linked to a number of academic or professional dimensions of human endeavor and expertise, such as science, law, medicine or business.

There emerge two approaches to describing and defining LSP – one that is based on investigations into linguistic aspects of registers, genres or text types typical for a particular specialized variety, and another one that depends more on insights into communicative purposes a particular variety is to serve. It seems that it is more customary to associate the terms sublanguage and technolect with the former approach and the notion of LSP with the latter one.

One of the major concerns of researchers subscribing to the former approach has been the question of the relationship between language as it is used in different areas of specialized fields of knowledge and language of everyday communication (labeled as Language for General Purposes or LGP). The standpoints and views on this issue have undergone some modifications over time. The earlier studies have been influenced by the general assumption that

specialized varieties reflect some unique characteristics not to be found in general varieties. Harris (1968), who is credited with coining the term *sublanguage*, referred to it as a subset of the sentences of a given language. At the same time he claimed that the grammar of a sublanguage is not the same as the grammar of general variety, which is to say that sublanguage grammar may contain rules not acceptable in general variety.

> Thus the sublanguage grammar contains rules which the language violates and the language grammar contains rules which the sublanguage never meets. It follows that while the sentences of such science object-languages are included in the language as a whole, the grammar of these sublanguages intersects (rather than is included) in the grammar of the language as a whole (Harris, 1968: 20).

This conception of a sublanguage as a set of grammatical and lexical patterns that can be put in opposition to the language of everyday communication started losing its appeal already in the 1980s. The computer-based analysis of large bodies of authentic texts, both spoken and written, made it evident that there is a high degree of overlap between a given language as a whole and its specialized varieties and the major difference between LSP and LGP is first and foremost of a quantitative nature. This is to say that certain forms or structures tend to occur with much higher or lower frequency in specialized varieties than in the language of the so called everyday communication (cf. Kittredge & Lehrberger 1982; Lehrberger 1982, 1986; Sager et. al., 1980).[15]

In view of these findings, the most rational way of defining the relationship between LSP and LGP seems to be that of a continuum, as suggested by De Beaugrande:

> (…), an LSP [language for specific purposes] does not meet the requirements in the usual sense … no LSP is composed exclusively of its own resources. Instead every LSP overlaps heavily with at least one LGP and is free to use any parts of the latter without express justification. One could not, for example, state the 'rules' which determine what parts of the grammar or lexicon of English may or may not appear in 'scientific English'; even such old stylistic restrictions as those forbidding 'sentence fragments' or 'slang' have been relaxed in recent years, especially within the discourse of computer technology. Hence we have more of a continuum than a division between LSP and LGP (De Beaugrande, as cited in Robinson, 1991: 20).

Yet another tendency is to define the notion of a sublanguage by referring to a restricted semantic domain or subject matter. Biber (1998: 15), for example, states that sublanguages are "highly specified registers of a language that operate within specific domains of use with restricted subject matter." However, such a definition does have its limitations. The problem with this assumption is that it can be difficult to assign a given text to a particular semantic domain since a number of texts incorporate material from different semantic domains. Furthermore, semantic domains or subject-matters are by no means monolithic entities. On the contrary, they typically embrace a variety of text types which might exhibit different lexical and syntactic patterns depending on the purpose of the text. Thus, not subject-matter but text purpose seems to be a factor which might be considered criterial for defining the notion of sublanguage. It focuses not so much on the language of particular varieties but on the com-

[15] The notion of *technolect*, albeit quite rare in the relevant literature, also seems to be an accurate one – *lect* suggesting, as in dialect, a form of language, not an independent language.

municative context of their use. As Mackay and Mountford (1979: 2-6) have rightly observed, LSP implies a special aim which may determine the precise area of language skills and functions required. On this view, thus, the proper way to understand the concept of special language is that "it is the same language [known as general language] employed for similar or different uses employing similar or different usages" (Mackay and Mountford, 1979:6). What is emphasized by the advocates of this approach, especially second language specialists, is not the language as such but the purpose of the learner for learning it. Seen from this perspective, *needs analysis* turns out to be an extremely essential component in describing and delimiting specialized varieties (for an overview of different approached to needs analysis within ESP, see Kaleta, 2002). From what has been said thus far, there emerges yet another definition of LSP:

> Language for specific purposes (LSP) is the area of enquiry and practice in the development of language programs for people who need a language to meet a predictable range of communicative needs (Swales, 1992: 300).[16]

It should be pointed out that these two approaches to describing and defining specialized varieties (i.e. learner-centered and language-centered) are not mutually exclusive. On the contrary, they often merge together, which leads to an approach which combines both insights into the language of specialized registers as well as a detailed analysis of communicative needs of particular professional or academic circles.[17]

3.4. Levels of LSP communication

At least three levels at which LSP communication is carried out are commonly distinguished. They are briefly outlined below (cf. Bowker and Pearson, 2002).

Expert to expert communication is communication among people with a similar level of conceptual as well as linguistic expertise in a given area of knowledge. Since experts in a given field share background knowledge and language, the density of highly specialized terminology employed by them tends to be very high. Typically, they do not provide explanations for the terms used unless they intend to redefine an existing concept or introduce a new one. This type of communication can be found in learned journals, research reports, academic publications or legal documents.

Experts and semi-experts communication: the latter are typically students or experts from related fields. Thus, there is a gap of expertise between people communicating at this level, which is to say that semi-experts do not have as much conceptual and linguistic knowledge as experts in a given field. In this connection, experts are likely to provide some explanations (which might include more general vocabulary) for the terms which they believe might be inadequately understood by the students. Consequently, the density of terminology

[16] For a survey of some general distinctions typically made within the broad field of LSP, and in particular in the area of English for Specific Purposes, see Dudley-Evans and St. John (1998: 6), and also Gramley and Patzold's (1992).

[17] For an overview of the linguistic research done under the auspices of ESP, see Robinson 1991, Dudley-Evans and St. John 1998, Kaleta 2002.

employed is going to be lower than in the case of expert to expert communication. The examples of texts functioning at this level include specialized textbooks aimed at people who already have some background in a given field, as well as popular science publications.

Experts and non-experts communication. Non-experts tend to be understood as people from unrelated professional fields who show some interest in a given discipline for one reason or another. In fact, no subject-specific knowledge is expected on the part of non-experts. Consequently, the conceptual as well as linguistic gap between the people communicating at this level will be larger than in either of the previously mentioned settings. The language used by experts will be much more simplified, it may even be reminiscent of the language used for general communication. Thus, term density is likely to be the lowest here. This kind of communication is typical for popular science journals or special interest columns in general newspapers and magazines. Popular science journals seem to be an indeterminate category in that their audience might include both semi-experts as defined above and laymen alike. This is why we have put them under the headings of both expert to semi-expert communication and expert to non-expert communication.

3.5. English – the international language of business

Business English (or English for Business Purposes) is perhaps the most widely used specialized variety of English. So what are the similarities and differences between Business English and other areas of ESP? As Ellis and Johnson (1994) suggest:

> (…) Business English differs from other varieties of ESP in that it is often a mix of specific content (relating to a particular job area or industry), and general content (relating to general ability to communicate more effectively, albeit in business situations) (p. 3).

This substantial overlap between LGP and LBP (Language for Business Purposes) has also been pointed out by Pickett (1989) who describes Business English as "a mediating language between the technicalities of particular business (…) and the language of general public" (p. 6). This twofold approach to business communication has been presented by Pickett (1986: 16) in a diagrammatic form:

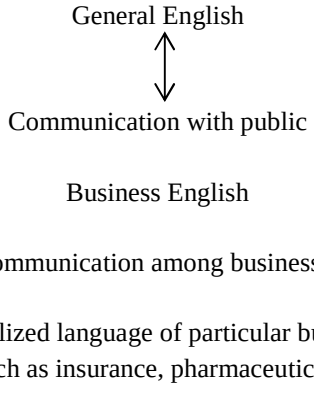

Fig. 3.1. Business English vs. General English (adapted from Pickett, 1986)

Furthermore, a broad distinction is made between BE as it is used in academic and occupational contexts. The former is required by students taking courses in disciplines such as finance or management and has a lot in common with other disciplines typically listed under the heading of English for Academic Purposes. The latter, on the other hand, is concerned with the language used by people actually working in business settings. While the identification of the language required by college or university students of BE seems to be quite a straightforward task, this does not seem to hold true for the language needs of practicing businessmen. The unimaginably large variety of situations and contexts in which business is done all over the world makes the task of identifying the core language a cumbersome undertaking. Dudley-Evans and St. John (1998) provide the following illustration to this point:

> Even within a particular business, the language requirements of the team negotiating, say, a &2m contract to build a generation station and of the team in charge of onsite installation may be very different. The purpose of the interactions, the topics covered and the professional relationships will all affect the choice of language (p. 55).

Hence, the distinction made by Pickett (1986) seems to be a useful one but not fine enough for today's wide-ranging business activities. It should be also observed that business language (or language for business purposes) has been insufficiently studied, compared for example with the language of EST (English for Science and Technology). Also, the relevant language work that has been hitherto done concerns mostly written communication. Little of the research has considered spoken interactions, mainly because of the difficult access to sufficient quantity of relevant data. As a result we can hardly speak of the core language for Business English.

Finally, what seems worth stressing here is the fact that much of the linguistic research done under the auspices of LSP and in the field LBP in particular has been in the form of master's thesis or doctoral dissertations and has not been offered to publication. This, in turn, means that there is a great demand for a large scale comparisons of the findings and an indication of which areas have been sufficiently covered and which have been neglected.

4. Corpus linguistics – issues and approaches

4.1. What is a corpus?

A linguistic corpus is typically defined as a large and principled collection of natural texts gathered in electronic form according to a specific set of criteria (Bowker and Pearson 2002: 9). The criteria for corpus collection depend on the nature of the project at hand. As a result corpora differ in design, size and format according to the purpose they have been compiled for. As a matter of fact, there might be as many different types of corpora as there are types of linguistic investigation. However, corpus linguistics literature tends to distinguish some broad categories of corpora which include the following:

- *Written* and *spoken* corpora: written corpora are much more common than those that consist of transcripts of spoken material. The reason for this is that the process of spoken corpus collection is much more difficult and time consuming than it is the case with written texts, a large body of which is easily accessible on the Internet, CD-ROMs, or can be obtained from printed sources by means of scanning techniques.
- *General reference* corpora (*core* corpora) and *special purpose* corpora (*specialized* corpora): general corpora aspire to represent a language as a whole. They are thus used to make general observations about a language. Specialized corpora, on the other hand, focus on a particular subset of a language and are assembled to study more specific topics. It must be noted here that specialized corpora might differ in the degree of their 'specialization'. For example, they might be restricted to a particular subject field (medicine, law, business etc.), dialect, register or even more specialized areas of linguistic behaviour such as non-native teacher talk during English classes. Yet another point is that although specialized corpora cannot be used to make observations about a language in general, they can be used together with a general purpose corpus to identify the distinct features of a particular sublanguage.
- *monolingual* and *multilingual* corpora: monolingual corpora consist of texts in a single language while multilingual ones contain texts in two or more languages. Multilingual corpora can be further divided into parallel and comparable corpora. The former contain texts in one language and their translations into another language/ languages. Comparable corpora, on the other hand, contain texts in different languages chosen according to the same set of principles (e.g. they represent the same genre, subject, dialect).
- *synchronic*, and *diachronic* corpora: synchronic corpora contain the linguistic material from a limited time period while diachronic corpora trace the development of language over a long period of time.
- *open* (*monitor*) and *closed* corpora: open corpus is subject to constant expansion while the closed one, as the name suggests, does not get modified once compiled.

– learner corpora: consists of examples of linguistic output of learners of a foreign languages.[18]

4.2. The rise of corpus linguistics

The emergence of corpus linguistics as a discipline must be traced back to the early 1960s when the grounds for the first corpus based projects were laid. It was then that the work on what later became known as Brown Corpus began at Brown University in the atmosphere of general indifference.[19] Almost at the same time the first computerized corpus of spoken British English has been compiled by John Sinclair at The University of Edinburgh. Since those early days a number of projects aimed at corpora compilation have been launched and successfully completed. Even a brief listing of all the corpora that have come into existence since the times of those pioneering enterprises would be a daunting task and well beyond the scope of the present chapter. However, at least a mention should be made of the most significant projects of the recent decades, that is the Cobuild project headed by John Sinclair and the British National Corpus. The former was a joint venture between Collins publisher and a research team based in the English Department of the University of Birmingham. The compilation of what became known as Birmingham Corpus began in 1980 initially with the aim of producing a new English dictionary. The publication of Cobuild Dictionary in 1987, however, was only the beginning of wide spread applications of the corpus in the mass production of language reference works. In fact, Cobuild dictionary project has opened up a wide range of research lines in the study and teaching of English. As Kennedy (1998) notes:

> The Cobuild project broke a new ground, not only because of the size of the computer corpus but because it associated corpus making with a particular commercial research and development project to produce corpus-based dictionaries, grammars, and language teaching courses (p. 47).

In the mid 90s the Cobuild corpus expansion into the so called The Bank of English began. This monitor corpus, which is continually supplemented with new texts, is considered to have set new standards in the development and use of mega-corpora.

British National Corpus compiled between 1991 and 1995 is generally considered to be one of the most ambitious corpus compilation projects yet attempted. It was established as a collaboration between academic centers at the Universities of Oxford and Lancaster, commercial publishers (Oxford University Press, Longman Group (UK) Ltd., W. and R. Chambers, the British Library) and the British government which covered half of the cost involved. The corpus containing about 100 million words of spoken and written texts has become an interna-

[18] It must be noted that it is not uncommon to come across some variation on this classification of corpora. For example some authors (e.g. Kennedy 1998, Leech 1992) categorize learner corpora as a subtype of specialized corpora rather than a separate category.

[19] A synchronic corpus of approximately one million words representative of the written English printed in the United States in the year 1961, became available in 1964.

tional benchmark for corpus linguistics, and an indispensable tool for wide variety of research focused on the description of British English.

Another mega-corpus of English is a more than 560-million-word Corpus of Contemporary American English (COCA), created by Mark Davies, professor of corpus linguistics at Brigham Young University. The corpus texts come from a variety of sources including spoken texts, fiction, popular magazines, newspapers, and academic texts. Both COCA and BNC are free to search through the same web interface with a limit on the number of queries (a non-restricted use is available at a cost). Both corpora have been tagged with CLAWS tagger and they come with a range of useful search and display options (e.g. re-sortable concordances, collocates, chart listings presenting totals for all matching forms in each genre, table listings for frequencies for each matching string in a given time period, customized lists).

It should be noted here in passing that the very practice of using large bodies of text for research purposes is much older than 1960s, especially if we look at the fields of biblical and lexicographical studies. Nevertheless, corpus linguistics proper must be seen in the context of advanced computer technology, which allows for the manipulation of data in ways that are not possible while dealing with printed matter. This has been accurately summarized by Kennedy (1998) in the following words:

> Corpus linguistics is thus now inextricably linked to the computer, which has introduced incredible speed, total accountability, accurate replicability, statistical reliability, and the ability to handle huge amount of data (p. 4).

4.3. A corpus-based or traditional approach?

The access to extended, authentic texts, spoken and written, and, in particular computer processing of those texts is what has opened new horizons in language research in most areas of theoretical as well as applied linguistics.[20]

The new approach has brought into light the discrepancy between a single individuals' intuitions about language and what actually happens when the same people actually use the language. Briefly speaking, what corpus linguistics research shows is that a person's conceptualizations of language use, albeit of great importance and interest, is not, or at least not always, in accordance with what can be observed on the basis of the language that has been actually produced in written or spoken form.

As opposed to the traditional approach which has been limited to a single individual intuitions and memory, corpus-based research relies, as noted earlier, on computers, which

[20] Corpus-based methods have found their applications in empirical investigations in a number of different areas including: lexical description, grammar, phonology, discourse, sociolinguistics, language acquisition, studies of style, educational linguistics. (For examples of corpus-based descriptions of English, see Kennedy 1998, Tognini-Bonelli 2002, Sinclair 1991, Biber 1998).
It should be also noted at this point that the scope of corpus-based analysis goes beyond the boundaries of linguistic description. The availability of large bodies of authentic texts have, for example, contributed to an increase in corpus-based research on language within computational linguistics – an interdisciplinary field concerned with studying and simulating with computers natural language production and interpretation processes.

make it possible to identify and analyze patterns of language use, allowing the storage of a larger database than could be dealt with by hand. Furthermore, computers have a clear advantage over human informants. As Biber (1998: 4) notes they "provide consistent, reliable analysis, they don't change their minds or become tired during an analysis."

Another thing corpus approach has brought into prominence is the probabilistic aspect of linguistic studies. This is to say that corpus linguistics is concerned not only with what is possible in language but first and foremost with those structures or uses that are *more likely* to occur in written or spoken discourse. Thus, corpus based studies, to large extent, depend on quantitative analytical techniques, which means that frequency counts are the most commonly employed procedure. However, this is not to say that it is done at the expense of qualitative studies. On the contrary, functional interpretation of the patterns found in quantitative analysis, explaining why the patterns exist, constitutes an equally important aspect of any research project conducted under the auspices of corpus approach. It should be also noted that more recently, corpus-based research has shifted towards the application of some advanced, statistical methods of analysis, which allow for identification and extraction of complex patterns of co-occurrence between different parameters of linguistic variation providing a new useful tool for explorations of semantic structures (cf. Baayen, 2008; Gries, 2017; Kaleta, 2014; Levshina, 2015).

Finally, it must be noted that although corpus approach constitutes a powerful tool for empirical investigations of language use, it should not be seen as a single correct approach but rather a complementary approach to the more traditional ones (e.g. printed sources, introspection, elicitation). In fact, research questions for corpus based studies often grow out of other kinds of investigations, e.g. hypothesis or theoretical frameworks, intuition evidence, which might lead to interesting corpus based investigations. Thus, instead of viewing corpus linguistics as an exclusive and the only correct methodology it seems more rational to view it as complementary to other possible ways of obtaining and analyzing linguistic data.

4.4. Corpus analysis tools

During the last decades a great deal of effort has been put into developing software and procedures for automatic analysis of text. Computing resources available for corpus analysis allow for increasingly more sophisticated linguistic investigations as well as greatly reduce some of the human drudgery associated with linguistic description. The most basic tools accessible for corpus-based analysis include:

- *Lemmatization*: the process of classifying identical or related word forms under a common headword known as lemma. Automatic lemmatization is a useful process for handling morphological complexities such as irregularities in verb inflections.
- *Word lists*: they are used for performing simple statistical analysis such as calculating the total number of words in corpus (referred to as a total number of tokens) as well as assessing the frequency of individual word forms (word types). The lists produced by commercially available software can be of different kinds. For example, they can be sorted in terms of alphabetical order or according to frequency of occur-

rence (descending or ascending), as well as by word length, or even in terms of alphabetical order of the last letter in each word. The examination of such lists is typically combined with simple statistical procedures such as 'normalization' (Biber, 1998), which is a way to adjust raw frequency counts from texts of different length so that they can be compared accurately.[21]

– *concordancing* programs: these are publicly available packages which allow users to search for specific target words (variously termed key words, node words or search items) which are displayed together with their collocational context, the size as well as the ordering of the context being the subject to modification by the user.

Of course, the list of tools available for corpus analysis is much more extensive than what has been presented above and the best way to get familiarized with them is through the commercially available toolkits for corpus analysis such as AntConc, WordSmith, Wmatrix, or Sketch Engine.

4.5. Raw versus annotated corpora

> *Corpora are useful only if we can extract knowledge or information from them. The fact is that to extract information from a corpus, we often have to begin by building information in.*
> (Geoffrey Leech in Garside et al., 1997: 4)

The above citation touches upon the issue of what are known as annotated corpora, which, as opposed to the so called raw corpora, are enriched with information about linguistic aspects of a text and can be used for more sophisticated linguistic investigations. Many different kinds of annotation are possible, the most commonly employed being *taggers* and *parsers*.

Taggers focus primarily on grammatical class information. The most common is known as part-of-speech tagging. There are special tagging programs (e.g. TAGGIT, CLG, or the popular CLAWS developed at the University of Lancaster, UK and used for annotation of British National Corpus), which assign words in a corpus to particular grammatical categories such as nouns, verbs, adjectives, adverbs, conjunctions etc.

Parsers are programs which add syntactic analysis to a corpus. They are used for identifying and labeling the function of words in phrases or sentences (e.g. subjects, verbs, objects,

[21] The procedure is that the raw counts of a particular linguistic feature are divided by a number of words in a given text, and then multiplied by whatever basis is chosen for norming total number of words in each text. To illustrate this Biber (1998: 263) provides the following example from the study of 20 modal verbs as they appeared in two texts, one consisting of 750 words, the other, of 1.200 words.
Text 1: (20 modals/ 750 words) x 1,000 = 27.5 modal per 1,000 words.
Text 2: (20 modals/ 1,200) x 1,000 = 16.7 modals per 1,000 words.
As frequency counts should be normed to a typical text length in a corpus, in the above example, a basis of 1,000 words has been employed (both texts were about this long).

etc.) as well as more complex syntactic information. It should be noted at this point that automatic parsing is still in the developmental phase and has not achieved the level of accuracy characterizing part-of-speech taggers.

4.6. Corpus design

The results are only as good as the corpus
(Sinclair 1991: 13)

The decisions as to the types and proportions of material to be included in the corpus influence almost everything that happens subsequently. The most important issues to be taken into consideration while compiling a corpus are those of *representativeness* and *size*. As Biber (1998: 246) notes: "(…) a corpus is not simply a collection of texts. Rather a corpus seeks to represent a language or some part of a language." Consequently, the decisions concerning what texts should be included in a corpus are crucial ones since they determine the kinds of research questions to be addressed as well as the validity of research results. Given that any language is characterized by a high degree of diversity in terms of different registers, text types, dialects, or subject matter (cf. chapter 3), for a corpus to be representative, it must take into account the full range of this diversity. The compilation of such a corpus is by no means a straightforward task. The point is that that no objective standards or parameters according to which texts should be selected for inclusion have been specified as yet. Deciding on what is central and typical in a language still seems to be a matter of subjective judgments made by particular research teams or individual corpus compilers and can only be seen as approximate. The only guideline that seems to be of some application here is that of Biber (1993: 243) who defines representativeness as " the extent to which a sample includes the full range of variability in a population." In other words, a corpus, in order to be considered as representative of a language, must draw on possibly the greatest number of sources in terms of different registers, genres, text types, or authors.

The above conclusions might as well be applied to the field of specialized corpora compilation. Even within very specialized subject fields, a number of different text types can be distinguished, e.g. those written by experts for other experts or by experts for non-experts, so the task of selecting the most representative types still constitutes a challenge. Additionally, specialized subjects are often multidisciplinary, which means that a decision needs to be made whether a particular domain is to be represented as a whole or the focus is to be on its particular subsection (cf. chapter 3). Thus, the principle of careful text selection and drawing on multiple sources seems to be equally important in the design of general as well as specialized corpora.[22]

The discussions of size in corpus design are typically concerned with the total number of words (tokens) and different words (types), but also with the number of texts from different

[22] For a more detailed discussion of issues in achieving representativeness see Summers, 1991 or Renouf, 1984.

categories and the number of samples from each text as well as the number of words in each sample. The point, however, is that there seem to be no hard and fast rules that allow to determine what these numbers should be. In fact, opinions differ rather sharply in this respect. Sinclair (1991: 18) for example, claims that "a corpus should be as large as possible, and should keep on growing." This is, however, quite a contentious statement since there are also opinions that large corpora might prove counter productive for the descriptive analysis of high-frequency items (e.g. prepositions) because it is hard to cope with qualitative analysis if there is too much data. In such situations, researches are forced to resort to statistical methods for support on how to make a convenient sample.

Corpuses for LSP studies are typically smaller than those used for LGP investigations. The reasons for this seem to be quite obvious. First, specialized texts are much harder to obtain than texts used for general purposes and second LSP by definition represents much more restricted area of language. It is generally accepted that well-designed corpora from about 10 thousand to several hundreds of thousands of words can be exceptionally useful in LSP research (cf. Bowker and Pearson, 2002: 48).

Apart from the general questions concerned with the overall size of the corpus, the next most controversial issue is the suitable size for the samples. Here opinions also differ and we can find a lot of variation across different corpora. For example, the Brown and the LOB corpora in the early 1960s consisted of 500 samples of 2,000 words each. However, some drawbacks of an even sample size have become quite apparent for many researches. One of Sinclair's arguments against such an approach is that linguistic features are not distributed evenly through particular texts.[23] Consequently, "(…) a corpus which does not reflect the size and shape of the documents from which it is drawn is in danger of being seen as a collection of fragments where only small-scale patterns are accessible" (Sinclair, 1991: 19). Thus, at present the tendency is for the major corpus compilation projects (e.g. The Bank of English) to opt for whole documents rather than uniformly sized samples.[24] This option, however, is also not trouble-free. In the case of monitor corpora, for example, the coverage of linguistic variation in the initial stages of compilation might not be as good as in the case of small samples. Additionally, "the peculiarities of an individual style or topic may occasionally show through into the generalities" (Sinclair, 1991: 19). However, Sinclair refers to these problems as "short-term difficulties" and, as mentioned earlier, sees the future in mega-corpora that are particularly relevant for the study of collocation and phraseology.

As can be seen from the above opinions, brief and selective as they might be, the issues of corpus representativeness and size are highly controversial ones and no reliable standards have been set as yet. It seems that researches own intuitions as well as the needs of a particu-

[23] This seems to be particularly relevant if we look at specialized languages where the distribution of important concepts can be restricted to particular sections e.g. opening paragraphs or concluding remarks. Thus, selecting extracts at random may result in eliminating the parts of the text relevant to the research project.

[24] This is, however, not to say that the policy of even sampling has been completely discarded. For one or another reason it is still employed by corpus compilers worldwide (cf. International Corpus of English, FLOB, FLOWN corpora).

lar research project are still the major guiding principles while deciding on how much and what kind of texts should be entered in a given corpus. However, there is undoubtedly one issue that most corpus compilers and analysts seem to be fully agreed on, namely that quantity cannot make up for the quality while designing a corpus. In other words, a smaller but a well-balanced corpora might prove much more useful than those that contain many million words but do not meet particular research needs. Therefore, what seems to be of primary concern is not the issue of size in the sense of number of tokens but the extent to which a corpus matches the purposes to which it is put.

PART II: THE ANALYSIS

5. Methodology

5.1. Objectives, materials and procedure

The analytical part of this project combines the theoretical insight of the cognitive theory of metaphor with corpus-based methods to explore the metaphorical structure of two broad, axiological domains, as they emerge from business/ economic discourse, that is *successful business performance* and *poor business performance*.[25]

The analysis is based on a specially designed corpus consisting of texts drawn from both English and Polish daily business press. There have been two principle reasons for our choice of daily business press for the corpus. First, the style of the publications in question – concise and informative – has been considered appropriate for the purposes of this project, which is concerned primarily with conventional metaphorical expressions. The other factor is the diversity of the topics covered by daily business titles, which provide a broad cross-section of issues and subjects related to the domain of business and/ or economics. Given that our focus in this study is on the domain of business/ economic activity as whole rather than its particular or more specialized areas, daily business press seems to be a good source of linguistic data. Also, journalistic texts turn out to be a rich source of evaluative concepts in that one of their principle concerns is that of analyzing and assessing the condition of particular business institutions as well as tracing and discussing factors behind positive or negative business trends. Below I present a brief outline of the basic terminology and procedure employed in the study:

- Axiological & quantitative metaphors

As has been noted in the preceding section, our primary interest is in the metaphorical nature of our thinking and talking about positive and negative business (economic) phenomena. Thus, the relevant cross-domain mappings, i.e. those involving the transfer of plus and minus valuations from the source to the target conceptual domains, will be referred to as *axiological* metaphors. It should be obvious that the degree of business/ economic success or failure tends to be measured or assessed in quantitative terms. There exists a whole battery of quantity related notions (or parameters/ indicators) by means of which such valuations are performed. Consequently, the domains of value and quantity tend to overlap to a considerable degree in our reasoning about business phenomena. The diagram below presents a sample of business related notions employed in evaluating business/ economic performance at different levels of business activity.

[25] It should be noted here that no a priori decisions have been made as to the nature and number of conceptual metaphors structuring the target domains in question, allowing the corpus to speak for itself.

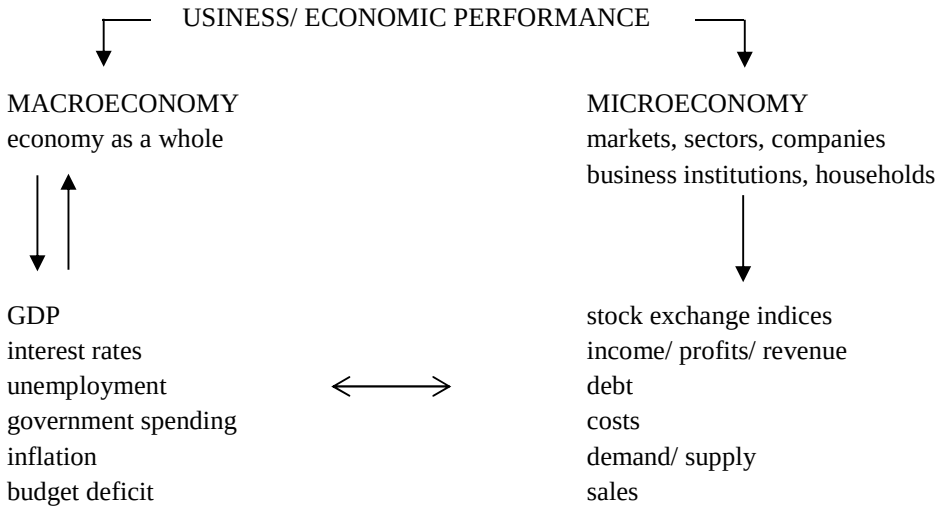

Fig. 5.1. Business performance at macro and micro-level

Thus, the valuations might concern the economy as a whole (macroeconomics) or they might concern particular markets, companies, business institutions, or individual households (micro-economics). Of course these two tend to be interrelated in that the performance at micro-level affects the overall macroeconomic parameters, and vice versa, the macroeconomic performance tends to have a stimulating or hindering effect on the performance of particular business institutions or entities.

- Key lemmas & lexemes

The present research follows the common strategy of deriving conceptual metaphors from their linguistic representations. At the initial stage, the corpus has been manually searched for instances of metaphorically extended senses with positive or negative connotations in the target domain of business activity. My goal at this stage was to gather possibly the largest collection of linguistic expressions used to portray the condition (either good or poor) of business institutions or economies.

One of the principal guidelines followed throughout the data collection and analysis is that lexical entries act merely as minimal prompts for meaning construction and that meaning construction is largely conceptual in nature, that is it depends on complex cognitive processing and a large repertoire of experiential knowledge. As argued by Langacker (1987: 155) "(…) linguistic expressions are not meaningful in and of themselves, but only through the access they afford to different stores of knowledge that allows us to make sense of them". Such *linguistic prompts,* or *points of access* will be referred to as *key lemmas* in the present research due to the key role they play in activating metaphorical mappings of different kinds. Each of the key lemmas evokes a specific (image-schematic) structure of experience (e.g. UP or DOWN orientation), which is metaphorically extended to more abstract notions (e.g. increase or decrease in value).[26]A lemma is the base form of a linguistic item (a dictionary form); it subsumes a range of inflected forms, which are referred to as *lexemes* in this study.

[26] In most cases key lemmas are single lexical items (e.g. TUMBLE, LIFT, AILING). However, the corpus has also yielded a large repertoire of relevant phrasal or idiomatic lexicon (e.g. PUSH UP, GO DOWN, TAKE

Key lemmas are subject to polysemous extensions, described by Lakoff as cases of systematically related target meanings for a single word whose primary meaning is in the source domain (1999:82). Thus, each key lemma has been analyzed with respect to both its most prototypical (source domain) meaning, and its target domain meaning (i.e. axiological or/ and quantitative meaning as traced in the corpus data).

- Organizing the key lemmas

After a substantial body of key lemmas has been collected at random, they have been organized according to the relevant source domains. This, in turn, has made it possible to determine the major conceptual metaphors underlying axiological reasoning within the field of business/ economics (e.g. GOOD IS FORWARD, BAD IS BACKWARDS etc.). Each source domain has been analyzed with respect to its constituent elements or, what I have labeled as *subschemas* or *subdomains*, that is more specific (or restricted) experiential structures constituting a more general representation (e.g. the general domain of motion has been subdivided into forward/ backward/ slow/ quick motion).

- Quantitative analysis

A quantitative analysis of the corpus data has been carried out in order to assess the degree of conceptual entrenchment and cognitive scope of particular metaphorical models. The tedious work of counting all the relevant occurrences of single items (token frequencies) has been done with the help of *Word Smith* concordancing tool.[27] However, the concordance lines needed a substantial amount of manual post-editing in order to eliminate irrelevant uses (for example literal senses). Each key lemma has been considered with respect to a number of its morphological variants, that is lexemes (e.g. the lemma tumble has been searched as tumbled, tumbles, tumbling).

- Comparative analysis

An important goal of this project has been to assess the similarities and differences in metaphorical conceptualizations of positive and negative business phenomena across the two languages under investigation. This part of the research has been done with a twofold purpose in mind. Firstly, it has been expected to yield, what might be termed, 'macro results', i.e. the results showing the presence or absence of a particular metaphorical concept in the cognitive makeup of English and Polish language users. The second goal has been to investigate the shared metaphorical concepts in order to establish how the two languages converge or diverge in the course of metaphorical projections onto the target domains. Thus, this part of the research has been concerned with specific lexical instantiations of particular metaphors and as such might be referred to as 'micro analysis'.

- Corpus data vs. dictionaries

Another goal of the analysis has been to confront the corpus status of key lemmas with their treatment by lexicographical resources. More specifically, my intention has been to find out whether the target senses have been included in lexicographical databases and whether their metaphorical nature has been recognized by lexicographers. This part of the research has

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A TOLL ON). Such fixed expressions have been treated on a par with single lexical items and as such have been also referred to as key lemmas.

[27] https://www.lexically.net/wordsmith/

been intended to shed some light on the degree of cognitive entrenchment of metaphorical senses extracted from the corpus data. The two main dictionaries consulted in the course of the study are briefly described below: *The New Oxford Dictionary Of English* (edited by Judy Pearsall, 1998) and *Uniwersalny Słownik Języka Polskiego* (edited by Stanisław Dubisz, 2003).

The general principle on which the senses in the The New Oxford Dictionary Of English (henceforth NODE) are organized is that each word has at least one *core* meaning, to which a number of the so called *subsenses* may be attached. Core meanings are defined in the introductory section of the dictionary as "the most central uses of the word in question in modern standard English, as established by research on and analysis of the British National Corpus and other corpora and citation databases" (2001: ix). Core senses are usually the most literal meanings that words have in modern usage. However, the dictionary compilers make a reservation that they are not necessarily the same as the oldest senses since meanings change over time and figurative senses of a given word are sometimes more frequent than the literal ones.

NODE introduces core senses by a bold sense number, under which the related subsenses are grouped, each of them being marked with a solid square symbol. As NODE compilers note "there is a logical relationship between each subsense and the core senses under which it appears" (2001: ix). Three different types of relationship of core senses to their subsenses have been specified by the editors. They are listed below together with some selected examples (2001: ix-x):

– figurative extensions of core senses: e.g. *backbone*

Core senses	the series of vertebrae in a person or animal, extending from the skull to the pelvis; the spine
Subsense	*figurative* the chief support of a system or organization; the mainstay; these firms are the backbone of industrial sector
Subsense	[mass noun] figurative, strength of character: he has enough backbone to see us through difficulty.

– specialized case of the core sense, e.g. *demand*

core senses	an insistent and peremptory request, made as of right
subsense	[mass noun] *Economics* the desire of purchasers, consumer, clients, employers etc. for a particular commodity, service, or other item: a recent slump in demand

– other extensions or shifts in meaning, retaining one or more elements of the core senses, e.g. *management*

core senses	[mass noun] the process of dealing with or controlling things or people
subsense	[treated as sing. or pl.] the people in charge of running a company or organization

It should be noted that NODE's entries are usually more complex than the examples presented above, which is to say that they typically include a few core meanings, each followed by a block of subsenses relating to it. Here is an example of such an entry, which defines the lemma 'forward':

> forward
> ►adjectives 1 directed of facing towards the front or the direction that one is facing or traveling: forward flight, the pilot's forward view ■ position near the enemy lines: troops moved to the forward areas ■ (in sport) moving towards the opponents' goal: a forward pass ■ in, near, or towards the bow or the nose of a ship or aircraft. ■ figurative moving or tending onwards to a successful conclusion: the decision is a forward step. ■ Electronics (of a voltage applied to a semiconductor junction) in the direction which allows significant current to flow
> 2 [attrib.] relating to or concerned with the future: forward planning.
> 3 (of a person) bold or familiar in manner, especially in a presumptuous way.
> 4 developing or acting earlier than expected or required; advanced or precocious: an alarmingly forward yet painfully vulnerable child. ■ (of a plant) well advanced or early. ■ progressing towards or approaching maturity or completion

Occasionally, I have also consulted: *Longman Dictionary of Contemporary English* (LDCE) and *Oxford Advanced Learner's Dictionary* (OALD). Apart from general reference works, specialist dictionaries have been consulted – *Oxford Dictionary of Business English for Learners of English* (ODBE) and the *Oxford Dictionary for International Business* (ODIB) (c.f. references).

As far as the Polish-language data are concerned, *Uniwersalny Słownik Języka Polskiego* (henceforth USJP) has been used as the main point of reference. From the point of view of the present research, the most important distinction USJP makes within particular entries is the one between *separate senses* (odrębne znaczenia) and the so called *shades of meaning* (odcienie znaczeniowe). The former have been preceded with Arabic numerals, the latter, on the other hand, have been marked with letters. Separate senses (odrębne znaczenia) correspond roughly to NODE's *core meanings* while the *shades of meaning* seem to be the equivalents of subsenses. Here is an extract from USJP exemplifying the semantic distinctions in question:

> gniazdo (…) 4.*książk*. a) z odcieniem podniosłym o domu rodzinnym, siedzibie rodu, plemienia, dawniej także o kraju ojczystym ○ Gniazdo rodzinne. b) *publ*. siedlisko, ośrodek jakiegoś ruchu, jakiejś społeczności, idei ○ Gniazdo spisku, szpiegostwa, herezji. Gniazdo

ruchu powstańczego, konspiracji. Gniazdo zacofania, ciemnoty. (…) 8.*techn*. a) wgłębienie, otwór, element konstrukcyjny, w którym osadza się czopy, łożyska lub końce innych elementów ○ Gniazdo łożyska, belki. b) zespół stanowisk roboczych dobranych odpowiednio do przydzielonych im zadań ○ Gniazdo montażowe. Gniazdo stanowisk ślusarskich. Gniazdo frezarek. (…)

The other Polish-language dictionaries consulted include: *Popularny Słownik Języka Polskiego* and *Słownik terminologii prawniczej i ekonomicznej* (cf. references).

5.2. Corpus description

The research has been conducted on the specially compiled comparable corpus of English and Polish language texts drawn from four different business newspapers. *The Financial Times* and *The Wall Street Journal* have been selected for the English-language part of the corpus. Polish corpus, on the other hand, includes texts drawn from *Puls Biznesu* and *Parkiet*. All these newspapers follow a similar format in that they:

- are published on daily basis,
- cover a variety of most topical business and economic subjects in a concise and informative style.
- target a similar kind of audience: which seems to range from experts to semi-experts and non-experts (cf. 3.4).

Here is a brief look at the each of these newspapers:[28]

The Financial Times (FT): Since its foundation in London in 1888, FT has gained an international recognition. Today it is printed at 20 print centres around the world, and, with over a million readers world-wide, is the first daily newspaper to sell more copies abroad than in its original home market. At present it has 3 international editions to serve the needs of its readers in the UK, Continental Europe, Asia and the USA. It is divided into two main sections. The Monday to Friday newspaper comprises Section 1, covering world news and analysis, and Section 2 which focuses on international business news, company news and market data. The newspaper also features more than 200 Surveys each year. The Weekend FT (Saturday edition) provides information and entertainment for readers at leisure.

The Wall Street Journal (WSJ): The paper consists of four sections:

- The first section reports on the most important news stories of the day. It includes stories on politics, economics, corporate news, general news, and editorial and opinions commentary.
- The second section, *Money & Investing*, is a comprehensive account of the previous day's activities in world financial markets.

[28] The background information as presented in this section has been drawn from the Financial Times, The Wall Street Journal, and Puls Biznesu official web pages.

– *The networking* section is devoted to helping readers understand the new technology-driven economy and to helping them leverage it for both business and personal advantage. It also covers management and marketing issues.
– *The Personal Journal* appears each Friday, covering a wide range of leisure-time activities. With separate pages devoted to property, personal finance and the arts, the section is a place for readers to turn as they look to the weekend and consider how best to spend their time and money. The articles in this section offer practical advice, guidance and commentary in this respect. This section, like the rest of the Friday paper, is meant to cover the full weekend.

Parkiet: The texts included in *Parkiet* center round four headings:

– *Informacje ze Spółek* [Companies' News] – concentrates on corporate news, examining the companies operating on the Polish market as well as giving the inside track on the latest business strategies, tactics and trends.
– *Finanse/ Gospodarka* [Finance/Economy] – comments on the condition of Polish economy bringing into focus the state finances and sector news.
– *Gospodarka* [Economy] portrays the trends in the worlds' economies commenting on topical world business, company news and market data.
– *Notowania* [Quotations] – the section comments on the performance of particular stock exchange indices both domestic (WIG20) as well as foreign ones (e.g. DIJA, DAX). Here we can also find the latest trends and data from international bond, currency and commodity markets.

Puls Piznesu: The first issue of Puls Biznesu appeared in 1997. Initially, the newspaper was issued twice a week on Tuesdays and Thursdays. Since October 1998, it has been appearing five times a week – from Monday to Friday. The paper features four sections plus a supplement:

– *Z kraju* (From the Country) – covers a wide spectrum of issues relating to the economic and political situation in Poland.
– *Ze Świata* (From the World) – presents selected business/economic news from around the world.
– *Inwestor* (Investor) focuses on Polish company news. It also sheds some light on the activities on the Warsaw's Stock Exchange as well as the condition of Polish currency, bond and commodity markets. This section also touches upon developments on foreign business/economic scene covering the major stories from around the world.
– *Przedsiębiorca* (Entrepreneur) – comments on legal and tax aspects of business activity.
– *Dodatek* (The supplement) – includes industry-specific reports (e.g. transport and logistics).

The reservation to be made is that not all the sections of the newspapers, as outlined above, have been considered for inclusion in the corpus. Some omissions have been made in the case of texts unrelated (or only loosely related) with the broad field of business and economics (e.g. sports news, entertainment information, politics etc.). Hence, while sections I and II of *The Financial Times* have turned out to be highly relevant for our corpus, special interest pages and Weekend FT have not been included in the corpus. Also, the *News* section

has been treated selectively, which is to say that the texts focusing exclusively on political issues have been omitted. A similar procedure has been followed with other newspapers. Thus, in the case of *The Wall Street Journal*, the *News* sections as well as *Money and Investing* have turned out to be the main source of linguistic data.

Puls Biznesu appears to be a more comprehensive publication than *Parkiet* both in terms of the size as well as the range of topics covered. Consequently, its inclusion in the corpus has been rather selective, especially with respect to the news section. As in the case of English-language texts, the articles dealing with political issues or stories only loosely related to the field of business/ economics have been left out. The largest number of texts has been extracted from *From the Country*, *From the World* and *Investor* sections. Finally, most of the articles published in the selected issues of *Parkiet*, have proved to be relevant to the present project. Consequently, the process of texts selection has been relatively straightforward in this case. The table below presents a description of the major components of the corpus:

Table 1. The structure of the corpus

Corpus type	– bilingual – comparable – synchronic – closed	
Languages	English and Polish	
Text type	journalistic texts	
Type of publications	business daily newspapers	
Subject	business and economics e.g.: – macro/microeconomics – company news – (stock, bond, currency)market data – sector news – financial information – trade – industrial relations	
Target audience	– experts – semi-experts – non-experts	
Dates of publications	Financial Times: 1999-2015 Wall Street Journal: 1998-2015	Puls Biznesu: 2004-2014 – January 5 2004 – April 1 2004 – May 4 2004 – May 31 2004 Parkiet: 2003-2017
Size	Words:137.670	Words:142.609
Number of articles	Financial Times: 126 Wall Street Journal: 186 Total: 312	Puls Biznesu: 150 Parkiet: 289 Total: 439
Average article size	Financial Times: 438 Wall Street Journal: 445	Puls Biznesu: 313 Parkiet: 331

6. Metaphors in the English-language business journalism

6.1. Introductory remarks

The focus of the present chapter is on the conceptual metaphors and their lexical correlates in the English-language part of the corpus. The metaphors are arranged according to the general source domains from which they originate (UP/DOWN, MOTION schemas, STRENGTH/WEAKNESS, HEALTH/ILNESS, VIOLENT BEHAIOUR scenarios, EMOTIONAL STATES). In each section, the source domains are subjected to some scrutiny with a view to identifying those aspects of the experiential input which are subjected to metaphorization and which provide a conceptual tool for understanding the target concepts of successful and poor business performance. Also, the dictionary status of the metaphorical senses of the lexical items triggering particular source domains is given some attention, along with the morphological processes involved in the formation of the key lemmas (cf. chapter 5). The discussion is abundantly illustrated with examples drawn from the corpus materials.

6.2. UP image-schema

English business discourse abounds in metaphors rooted in UP image-schema. The following lemmas play a key role in structuring the target domains of successful and unsuccessful business performa: GROW, CLIMB, JUMP, SOAR, LEAP,LIFT, RAISE, RISE, ELEVATE, CEILING, BALOON, SKYROCKET, UPSURGE, UPTURN, UPBEAT, UPGRADE, PEAK, TOP, HIGH. Also, a number of phrasal items have been traced in the corpus materials: PUSH UP, SHOOT UP, GO UP, EDGE UP, DRIVE UP, MOVE UP, RIDE UP, PICK UP, CLOSE UP. The examples below illustrate the use of these lemmas in the corpus texts:

CORPUS EXAMPLES:[29]

1. From launch in 1984, the group *has grown* to be one of UK's *top* 10 companies, measured by market capitalization.
2. The number of people out of work and claiming benefits dropped by 14,000 last month, from a revised 1.325m to 1.311m, suggesting that economic growth may be more robust than previously thought.
3. Mitsui Trust, which announced on Tuesday it was planning to merge with Chuo Trust climbed Y2 or 1.74 per cent to Y117. Chuo Trust jumped Y44 or 9.36 per cent to Y514
4. Almost 669,000 new subscribers helped TMN, one of Portugal's three mobile phone operators, lift net income by 80 per cent in 1998 to Es20.2bn
5. He said the co-operative was seeking to raise standards of service.
6. (…) Stanley Fischer, the IMF's first deputy managing director, called on the Russian government to take immediate action to cut spending, raise revenues, and target a primary budget surplus (…).

[29] Key lemmas have been underlined in the examples.

7. FI Group yesterday continued the upbeat trend among information technology companies when it unveiled a 75 per cent leap in half-year pre-tax profits to Pounds 7.5m.
8. Tafisa, a Spanish timber products company, marked the beginning of a process that has elevated Sonae Industria from a relatively small company on an international scale to the world's leading producer of wood conglomerates.
9. With double the spirits sales of its nearest competitor, a network that covers much of the globe and a range of top-selling brands in most of the main categories, it has formidable competitive strengths.
10. Why then, with US equities already at peak levels, are investors in such sanguine mood?
11. Some analysts also feared the market for business jets, of which Gulfstream claims a 60 per cent share, had peaked
12. Since last August, the dollar has declined from its peak by more than 25 per cent against the yen - hurting Japanese exporters, but providing crucial succour for hard-pressed US companies.
13. TORONTO pushed ahead strongly, although volumes were light and momentum was said to be approaching a ceiling.
14. Most of the fall in activity at Liffe was in the second half of the year, while its rivals recorded higher business.
15. Electrical goods retailer Dixons was the best performer in the FTSE 100 with the shares hitting a new high as the market appreciated Wednesday's news of the success of the group's internet service.
16. There are plenty of reasons for Seoul to cheer, and the decision this week by Standard & Poor's to upgrade South Korea to investment grade is one of them.
17. The recent upturn in UK economic data has started to force analysts to revise their expectations of how far interest rates will fall
18. The driving force behind the market's latest upsurge was a mixture of renewed exceptional strength on Wall Street
19. In September, Heidelberger will open an advanced logistics centre to provide customers' machines with spare parts within 24 hours since the cost of machine "downtime" has skyrocketed for printing companies.
20. Sony pushed up Y540 to Y11,290, Hitachi improved Y12 to Y850, and Toshiba climbed Y39 to Y829.
21. The Vietnam war drove up public spending and hence long-term interest rates,
The shares, which have fallen from 12p in March last year, edged up 1/4p to 3p.
22. Analysts expect phosphate demand to pick up in about 18 months.
23. Shares in Inn Business - 46 1/2p before the talks - closed up 3p at 69 1/2p.
24. The market has shot up in the last two months.
25. Dell Computer and Apple of the US have ridden up on the internet-led boom for home personal computers where sales growth in Europe of around 20 per cent last year helped soften slowing US volume.

As these examples show, the source domain of UP orientation turns out to be greatly diversified in terms of the experiential input involved in mapping onto the target domain of business performance. Thus, we can distinguish here some general subcategories:

a. physical growth of living organisms [GROW, GROWTH]
b. lifting/moving entities to a higher level/position [LIFT, RAISE; ELEVATE, PUSH sth UP, MOVE sth UP, DRIVE sth UP].
c. coming or going upwards [JUMP, CLIMB, LEAP, SOAR, RIDE UP, EDGE UP, MOVE UP, GO UP].
d. the highest parts or upper surfaces [TOP, PEAK, CEILING, (n., adv.) HIGH, CLOSE UP]

e. objects capable of rising up in the air [SKYROCKET, BALLOON]
f. vertical measurements [(adj.) HIGH]

These various experiences can be further rearranged according to the underlying image-schematic structures they evoke. The most general or prototypical schema of UP orientation is depicted in fig. 6.1:

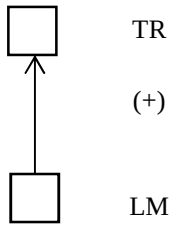


Fig. 6.1. UP image schema

As indicated in the diagram, UP schema consists of three elements – the entity located up (trajector, henceforth TR), the path traversed by this entity in order to reach its upward destination (the arrow) and a point of reference, which is downward location (landmark, henceforth LM)[30]. This kind of LM seems to be an indispensable constituent of UP schema since the experience of UP orientation becomes meaningful only in the context of our experience of DOWN orientation. In other words, UP means what it means to us, because DOWN means what it means. Thus, this close experiential bond that exists between these two canonical orientations must be reflected in the schematic representations of both UP and DOWN image schemas. Furthermore, UP image-schema is typically associated with positive valuation (indicated by the plus sign). That is, it arises from positively valued aspects of our physical or socio-cultural functioning such as those outlined by Krzeszowski (1997) in his *Angels and devils in hell*:

> In its canonical form the human body is directed *upwards* (…). When we are healthy, when we feel well, we stand erect, with our heads *lifted* and our faces *up*turned. People also grow *upward*s. Growing upwards appears to be our primary positive experience associated with the orientation UP. (…) We greet friends with *up*lifted hands. Out thump directed *up*wards is a sign that everything is fine. Through our mouth, situated in the upper part of our bodies, we take nourishment, which sustains our life. A smile as an expression of joy and happiness involves upward curving of the corners of the mouth (p. 113).

UP image-schema, as depicted in fig. 6.1., is instantiated by other more specific schemas which bring into focus its particular idiosyncrasies. These more specific instantiations will be referred to as *subschemas* in this discussion. In the case of UP image-schema, the following substructures can be distinguished (the lexical correlates of each *subschema* have been provided in square brackets and the profiled elements have been marked with bold lines):

[30] The notions of TR and LM are used in the sense of Langacker (1987, 1991). The former stands for the figure or the most prominent element in a relational structure and the latter refers to the other entity in a relation (or schema) which functions as a point of reference.

a. dynamic-causative subschema – profiles upward motion and causative force effecting it; it is typically represented by transitive verbs [LIFT, RAISE, ELEVATE, UPGRADE, PUSH UP, SEND UP, DRIVE UP]

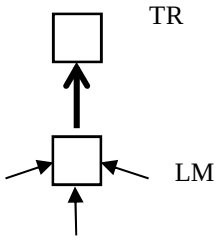


Fig. 6.2. Dynamic-causative UP schema

b. dynamic-reflexive subschema – profiles upward motion to the exclusion of the causative force; it is typically represented by intransitive verbs [GROW, CLIMB, JUMP, SOAR, SHOOT UP, GO UP, EDGE UP, MOVE UP, RIDE UP, CLOSE UP, PICK UP]

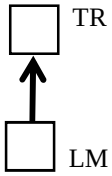


Fig. 6.3. Dynamic reflexive UP subschema

c. Top subschema - profiles upper location or upper parts of entities [TOP, PEAK, CEILING, (n) HIGH].

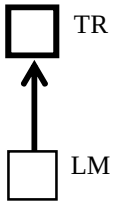


Fig. 6.4. Top schema

d. Verticality subschema – profiles vertical measurements, and more specifically a big distance from the base to the top; the entities having relatively small distance from the base to the top serve the function of LM [(adj, adv.) HIGH]

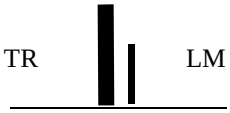


Fig. 6.5. Verticality schema

It should be noted at this point that a single key lemma can be linked to more than one underlying image schematic structure. This is the case, for example, with the lemma HIGH, which evokes either the VERTICALITY or TOP subschema depending on their lexemic form – nominal and adverbial lexemes represent the former pattern, while adjectival forms instantiate the latter (cf. examples 14 and 15, respectively). Similarly, the verbs that can be both transitive and intransitive have double schematic representations, labeled above as CAUSATIVE and REFLEXIVE schemas (cf. MOVE UP versus MOVE sth UP).

The ontological correspondences between the source domain of UP orientation and the target domain of an *increase in quantity/value* are established by means of the conceptual metaphor MORE IS UP, which should be seen as a superordinate or umbrella concept embracing all the configurations discussed above. This quantitative metaphor is typically accompanied by the evaluative metaphor GOOD IS UP whereby we get a conceptual handle on the target notion of *successful business performance*. These two conceptual metaphors tend to be activated simultaneously, as a result of which the relevant linguistic expressions incorporate both the notion of an increase in quantity or value as well as that of successful performance. However, it might also be the case that one of these metaphors is more salient that the other, which results in either the quantitative or axiological meaning becoming more prominent. Examples (5) and (6) illustrate the point being made: the former profiles the *improvement*, and the latter the *increase* sense of the lemma RAISE. However, in most cases the distinction between the axiological and the quantitative component of the semantic pole of a given key lemma can hardly be made. For example, the expression 'top-selling'(example 9) highlights the evaluative (*top* meaning here *best*) and quantitative (*top* meaning *large* quantities of the products sold) aspects with equal force, which points to the tight conceptual bond holding between MORE IS UP and GOOD IS UP metaphors.

However, the positive axiological load of UP orientation is subject to some limitations, which is to say that UP schema is occasionally the source of negatively charged senses. In order to account for this axiological duality we will refer the reader to Krzeszowski's distinction between *absolute* and *actual* values (Krzeszowski, 1997: 132-140). As is argued by Krzeszowski, the constituents of the UP image schema (i.e., TR, LM and the relation holding between them) are axiologically charged, representing the so called *absolute values*. These values determine the axiological charge of linguistic expressions or concepts arising from particular schemata as a whole. This latter type of valuation is referred to *actual values*. Thus, the positively charged TRs tend to give rise to positive actual values, while the negatively valued ones trigger negative meanings. This is illustrated in (26) and (27) below, where the trajector entities, that is 'levels of consumer optimism' and 'current account deficit', carry positive and negative axiological load, respectively, which is reflected in the actual values of the relationships profiled by these expressions (positive and negative business phenomena, respectively).

26. Sales of new homes in the US hit a new record in November, the government reported yesterday, as ample job opportunities and soaring *levels of consumer optimism* fuelled sales increases from coast to coast.
27. A soaring US *current account deficit* will eventually hit the dollar (…).

As shown by these examples, a relationship profiled by a single lemma (here SOAR) can be assigned different actual values depending on the absolute values of the trajector entities. More specifically, in (26) the positive axiology associated with UP image-schema, which is consistent with the positive valuation of the TR (consumer optimism), is preserved under metaphorization, while in (27) it is not, which is due to the negative absolute value of the TR (account deficit). The latter type of construal, i.e. the one where the prototypical axiological value assigned to a particular schema is not preserved under metaphorical mapping, will be referred to as a *reverse metaphorical transfer*. The point, however, is that the TR entities are not always clearly identifiable as carrying positive or negative value. Consider (28) and (29):

> 28. Given the tightening in monetary conditions that has occurred, as both *the yen* and *long-term interest rates* have soared, there is a strong chance that demand and output will contract sharply this year, as well.
> 29. *Shares* (TR) soar as earnings confidence strengthens.

The TRs of the relationships profiled in (28) and (29) are axiologically neutral, i.e. they are neither positive nor negative in themselves, yet (28) conveys an overall negative valuation, and (29) positive one. This interpretation is due to the linguistic (conceptual) content of the context in which the key lemma occurs. Thus, contextual information provides an important indication when assigning positive or negative valuation to the quantitative concepts arising from the UP image schema. This is particularly true of the notions raising some controversy within the field of business/economics, such as raising/lowering taxes or raising/lowering interest rates, which can be judged as either positive or negative depending on individual standpoints or perceptions.

To sum up, the prototypically positive valuation of the UP image schemata is extended onto the target concept of successful business performance if the TR in a relationship profiled by a given verbal predication has positive absolute value, if the TR is negatively charged, on the other hand, the emergent actual value of the relationship is minus (unsuccessful business performance). Neutral TRs trigger either positive or negative values (GOOD IS UP/BAD IS UP), depending on the valuation conveyed by contextual information. It should be noted at this point that instances of *reverse transfer* are quite rare and the dominant pattern is the one in which the absolute 'plus' value associated with UP image schema is preserved under metaphorization (see examples 1-25).

Up to this point we have been concerned with the interplay between two major metaphors participating in the sense extensions from UP schema – MORE IS UP and GOOD IS UP. Now, I am going to turn to other metaphors which are associated with more specific aspects of the UP orientation. One of these aspects is the notion of pace inherent in the motion schemas (both reflexive and causative) which is transferred on the target domain via MORE IS QUICK and LESS IS SLOW experiential correlations.[31] The former lies behind the sense extensions of lemmas that imply energetic and quick movement upwards, e.g. JUMP, SOAR,

[31] The experiential grounding of these two concepts seems to be the correlation between the pace of motion and the distance covered, that is the *faster* we move the *more* ground we cover. Conversely, the *slower* pace correlates with *less* distance covered in the same period of time.

SHOOT UP, which, in turn, translates into the language of the target domain as an increase *by large amount* (examples 3, 26, 24). Conversely, the correlation LESS IS SLOW is instrumental in conceptualizing the target notion of a *less substantial* increase in quantity/value etc. Thus, the sense extensions of lemmas such as EDGE UP and CLIMB, both of which imply slow, effortful motion at the experiential level, are motivated by the seemingly contradictory cluster of metaphors MORE IS UP and LESS IS SLOW (examples 3, 21).

Another idiosyncrasy inherent in the source domain of UP orientation which is subject to metaphorical mapping is the distance between TR and LM. In brief, this dependency can be specified as MAXIMUM VALUE IS MAXIMUM HEIGHT and it applies to lemmas such as TOP, PEAK, or CEILING (examples 9-13). Yet, it should be noted here that most of the lemmas yielded by the corpus do not make any references to the pace of motion or the distance between TR and LM and, in such cases, the metaphor MORE IS UP and/or GOOD IS UP constitute self-sufficient tools for understanding the target senses.

As far as the relevant dictionary entries are concerned, on the whole NODE recognizes the extended nature of the target senses, listing them as the 'subsenses' of the 'core senses'. However, there are also instances where these two kinds of meaning (source and target) are treated as separate, core meanings, as is the case in the entry for the verb GROW. The physical growth of living organisms and the notion of increase are listed as core senses (1) and (2) respectively, no links between them having been recognized by the dictionary compilers. Yet, in the nominal entry (GROWTH) the target senses are consistently treated as subsenses of the core meaning (1), which reflects the cognitive theory of sense extension from physical to more abstract or intellectual domains.[32] Thus, what we can observe here is a certain inconsistency in distinguishing between core meanings and subsenses with respect to particular lexemic forms. RAISE, RISE, and TOP also treat the spatial and quantitative senses as separate ones, which seems to be yet another indication of a systematic blurring of the metaphorical connections holding between the source and target meanings over the course of time.

Another point that emerges from the inspection of the relevant dictionary entries is that some of the definitions do not draw any distinction between the source and target meanings. In other words, these two are brought together in a single explanation. Such instances will be referred to as *sense blending* in this book. The adjective TOP can serve as an illustration of this phenomenon – the example sentences to be found in NODE (the top button of his shirt, a top executive) make it clear that physical location and position in a hierarchy are treated as instances of the same single sense.

Worthy of mention are also entries which provide explanation only for the target (metaphorical) senses, to the exclusion of the source domain meanings. The nominal form of the lemma HIGH seems to be a case in point here. While the definitions of this item might be interpreted as a case of sense blending, the examples to be found in the reference works consulted unequivocally give priority to the target notion of increase in quantity/value: 'commodity prices were actually at a rare high' (NODE), 'Profits reached a new high last year' (OALD), 'The price of oil reached an all-time high this week' (LDCE). No examples of the

[32] It is also worth noting that the lemmas GROW/GROWTH have achieved a prominent status in the field of business and economics giving us a handle on the target notions of business expansion and increase in economic value as specified by NODE.

spatial sense have been traced, which might suggest that the quantitative meaning of this lexeme is much more deeply entrenched than the spatial one. The cases where a particular inflectional variant of a lemma has only target domain applications will be termed as *part-of-speech extension*. As another example of this type of extension, let us consider the adjectival and verbal forms of the lemma PEAK (examples 10, 11). These two forms function exclusively within the quantitative domain, as opposed to the nominal form which has both target and source domain semantic representation (i.e. refers both to the highest point of a mountain and to the highest value or maximum quantity). Thus, the adjectival and verbal forms have been subjected to metaphorization, by analogy to the nominal form. Yet, unlike the nominal form they do not convey any spatial meanings. A similar kind of extension is represented by the lemma SKYROCKET (example 19) whose verbal form is defined only in figurative terms, as opposed to the nominal variant which functions as a physical notion, i.e. vehicle used to travel in the space.

An interesting mechanism of sense extension is also observed in the case of lemmas such as UPGRADE, UPTURN, UPSURGE (examples 16-18) which differ from the ones discussed earlier in that they function exclusively in the context of the target domain of quantity and value irrespective of their inflectional form. Yet, their morphological connections with the spatial orientation are clearly delineated through the prefix up, which activates the relevant metaphors. This type of semantic extensions, which involves morphological variation or modification of lexical items associated with a given experiential structure, and which function exclusively as target concepts will be referred to as *morphological extensions*. As can be seen this type of extension usually involves compounding. Another example is the lemma UPBEAT (example 7). The point, however, is that upbeat is defined by reference works only in terms of the emotional states such as 'optimism' or 'cheerfulness', no mention being made of the evaluative or quantitative meaning, as yielded by the corpus. Consequently, what we have to do with here is a kind of *indirect metaphorical transfer*, where the UP orientation enters the target domain of successful business performance via another non spatial domain, i.e. that of emotional states (cf. HAPPY IS UP).

Finally, a mention should be made of the phrasal lexicon, where the up particle combines with various verbs, typically verbs of motion (but not only), to convey quantitative and axiological notion of successful performance (examples 20-25). Only four items have been found to have target domain entries (yielded by OALD): PUSH UP, SHOOT UP, GO UP, PICK UP. As the corpus data indicate, the construction verb+up is quite productive, with the verbal slot being occupied by various verbs including EDGE, DRIVE, MOVE, RIDE, CLOSE. None of these combinations have been accounted for in dictionary entries consulted, yet they all are characterized by a complete semantic transparency. They apparently owe this transparency to the UP particle, which leads to automatic and cognitively effortless activation of the MORE IS UP metaphor and, in most cases, also GOOD IS UP.

6.3. DOWN image-schema

The experiential input associated with DOWN orientation can be organized according to some general subschemas, analogous to the ones presented in the preceding section, with the main difference lying in the direction of the motion arrow. The graphic representation of the prototypical DOWN schemata is given in 6.6:

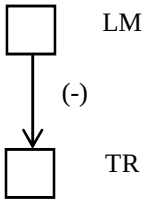


Fig. 6.6. DOWN image schema

DOWN image-schema tends to be assigned minus value at the prototypical level. Tracing this axiology back to its grounding, we will again take a recourse to Krzeszowski's inventory of the relevant experiential correlations:

> (…) when we are ill, and when we die we stoop to the ground, where we rest after death. We defecate through the hole situated in the *lower* part of our bodies, disposing of harmful and/or useless substances. (…) Our thump pointing downwards means that things have assumed a bad turn, when our head sinks down, we are sad, we feel defeated and miserable. Grimaces and crying as expressions of pain and sorrow involve downward curving of the lips (Krzeszowski, 1997: 113).

DOWN image-schema, as depicted in 6.6. subsumes a few more specific representations, which include the following (as before, the lexical correlates of each subschema have been placed in square brackets):

a. Dynamic-causative schema – profiles downward motion and causative force effecting this motion; it is typically instantiated by transitive verbs [DROP, DIP, SHED, BRING DOWN, DRAG DOWN, DRIVE DOWN, PUSH DOWN].

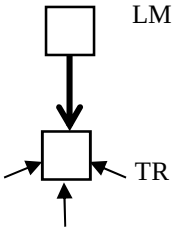


Fig. 6.7. Dynamic-causative DOWN schema

b. Dynamic-reflexive schema – profiles downward motion to the exclusion of the causative force; it is typically represented by intransitive verbs [DROP, FALL, TUMBLE, PLUNGE, SLIP, SLIDE, DIVE, SINK, DIP, SLUMP, COLLAPSE, CRASH, PLUMMET, END DOWN, EDGE DOWN, GO DOWN].

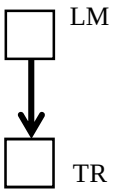


Fig.6.8. Dynamic-reflexive DOWN schema

c. Bottom schema – profiles lower locations or lowest parts of entities [BOTTOM, (n., adv.) LOW].

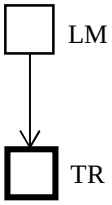


Fig. 6.9. Bottom schema

d. Verticality schema – profiles vertical measurements; the entities characterized by relatively small distance from the base to the top perform the function of TR whereas those having relatively big distance from the top to bottom act here as LM [(adj.) LOW].

Fig. 6.10. Verticality schema

CORPUS EXAMPLES:

30. Software giant SAP made an early attempt to rally after last week's 15 per cent fall following disappointing 1998 results.
31. The US Treasury market tumbled yesterday and dragged the European markets down as the dollar fell to its lowest against the Japanese yen in more than two years.
32. A Brazilian collapse has been at the top of US policymakers' list of worst nightmares for most of the last year.
33. (…) the downturn in Asia and Japan drove pre-tax profits down 11.1 per cent to Y288.6bn.
34. Company of America lost Dollars 3 to Dollars 85 3/8 after Morgan Stanley Dean Witter downgraded the shares to "underperform".
35. The banks feared that the incompetence and corruption that proved the downfall of Gitic was present in many other Itics.
36. The SFA said IFC had an overall Pounds 200,000 shortfall which would hit about 500 clients, most of whom were individuals.
37. In BUENOS AIRES, the Merval index closed sharply lower, down 10.23 per cent at 356.16, a 40.62-point dive, the worst performing market in Latin America.
38. The World Index rose a remarkable 23.5 per cent in sterling terms, the local currency gains being slightly enhanced as the pound sank back two or three percentage points, a decline not nearly enough, however, to satisfy the UK's beleaguered manufacturing sector.
39. Early gains were extended at midsession in MEXICO CITY as Wall Street recovered from a dip following testimony by Alan Greenspan, US Federal Reserve chairman.
40. Orders rose 0.6 per cent to a seasonally adjusted Dollars 337bn (Pounds 200.5bn) following a 1.7 per cent plunge - the sharpest in five months
41. The silence underscores the importance of the alliances to the Japanese carmakers amid the industry's deepest slump in decades.

42. But the risks to even modest growth will come from the international environment, through the chance of a collapse of the Brazilian economy and the growing "bubble" in the US equity market.
43. She highlighted the shock of the Asian market crash in the final quarter of 1997, which led to money being withdrawn from emerging markets around the world.
44. For the biotech sector 1998 was a dismal year. Initial public offerings were
scarce, and companies that put deals together saw share their prices plummet after coming to market.
45. PARIS ended off the bottom with the CAC-40 index down 141.9 at 3,958.72 after a low for the day of 3,845.77. Renault was the day's steepest faller, sliding 3.55 or 8.6 per cent to 37.60.
46. But the Dow slipped back to be 20 lower as London closed.
47. By 0956 GMT the all-day computer-traded Xetra DAX index had shed 142.12 points or 3.35 per cent to 4,095.63 points after sliding as low as 4,065.33 points.
48. The introduction of these services brought revenues from its core cable TV business down to 92.4 per cent of the total Fl 282.1m
49. In these circumstances, any US measures that could be seen as pushing down the yen might not be politically. wise.
50. Pay settlements have remained broadly stable over the past six months, even as the rate of inflation has edged down, according to a leading pay research group.
51. The market we service does go up and down in the cycle, but it's not peaks and troughs, it's a slight curve," said Richard Johnson, chief executive.

Apart from the key lemmas as listed above, the corpus has yielded instances of what we have termed *morphological sense extensions*, i.e. morphological combinations which consist of DOWN and UNDER particles combined with other representatives of DOWN schema or with items unrelated to spatial orientations: DOWNTURN, DOWNGRADE, UNDERPERFORM, DOWNFALL, SHORTFALL (examples 33-36).

A cluster of conceptual metaphors is responsible for establishing ontological correspondences between the source and the target domain. As expected, the overlapping concepts LESS IS DOWN and BAD IS DOWN are most prominent, giving rise to the blended concept of *decrease in value* and *unsuccessful performance*. The negative axiological load appears to be most explicitly conveyed by DOWNTURN, SHORTFALL, UNDERPERFORM, (n) SLUMP, (v, n) COLLAPSE, CRASH, (v) SLIDE, (v) BOTTOM, GO DOWN. It should be noted at this point that DOWNTURN, (n) SLUMP, and (n) CRASH have been recognized by NODE as having a special status within the target domain of business denoting 'a decline in business/economic activity or failure of business enterprises.' Also, there are words or phrases which evoke more specific or vivid images, such as immersion in water (DIVE, SINK, PLUNGE, DIP) or destruction images (COLLAPSE, CRASH).

Another point is that while the quantitative metaphor LESS IS DOWN has universal applications, the axiological concept BAD IS DOWN is subject to some restrictions, which can be traced back to the absolute values of the TR entities. The axiological transfer involves a different configuration of values from the one observed for UP schema. Consider the following examples:

52. *Operating profits* before exceptional items would drop from Pounds 17.6m to about Pounds 8m this year, it warned.
53. Oracle will not escape one concern, which contributed to *SAP*'s recent drop, namely that companies will divert their IT resources to dealing with Millennium.

54. A strong rebound and subsequent stabilisation of the rupiah late last year, combined with a sharp drop in *inflation*, has given Indonesia some relief and hope of recovery …
55. Yet, margins in the first half rose in spite of a 10 per cent drop in the *price of used cars* since last year.

The general pattern is that the prototypical minus value of DOWN image schema is preserved under the mapping when the TR is either plus or neutral (examples 52, 53). When the TR is negatively loaded the actual valuation of the profiled relationship is positive (examples 54). This is of course related to the fact that a decrease in something that is conceived of as a positive phenomenon is going to be assessed as a negative trend, and vice versa, a decrease in negatively valued occurrences is going to have positive evaluation. As far as neutral TRs are concerned, the overall valuation tends to be negative, which means that the negative axiology of DOWN schema is preserved under metaphorization (cf. 53). However, some instances of reverse axiological transfer (under which DOWN gives rise to positively charged senses) have also been recorded in utterances with neutral LMs (cf. 55).

As in the case of UP orientation, also here the quantitative metaphor LESS IS DOWN (often accompanied by BAD IS DOWN) is supported by the pace metaphors MORE IS QUICK and LESS IS SLOW. The former brings into focus energetic and quick movement downwards and is activated by lemmas such as TUMBLE, DIVE, SLUMP, PLUMMET, PLUNGE giving us a conceptual handle on the target sense of *rapid* or *substantial* decrease in value or amount (cf. examples 31, 37, 40, 41, 44). Conversely, items which profile a slow or gradual motion downwards such as SINK or EDGE DOWN, when mapped onto the target domain, suggest a *less* substantial decrease in quantity/ value (cf. examples 38, 50). This, in turn, testifies to the activation of LESS IS SLOW metaphor.

A word of comment is now due to the dictionary treatment of the lexemes under consideration. The reference works tend to recognize the quantitative (decline) senses of these lexemes, listing them either as core meanings (cf. NODE's entries for (v) DROP, (v. n) FALL, (adj.) LOW, (v) SINK, (v) SLUMP, (v) COLLAPSE, (n) CRASH), or as subsenses. Furthermore, the nominal forms (n) LOW and (n) SLUMP (examples 41, 45) are restricted to the target domain and as such should be classified as *part-of-speech extensions* by our definition.
There is no mention, on the other hand, of the *decline* sense of the lemma SHED (example 47). Yet, its extended meanings is transparent due to the underlying metaphor activated via the image of leaves (or fruit) falling off a tree. Also, most of the phrasal lexicon (examples 48-51) has not been accounted for by reference works, the only exception being BRING DOWN and DRAG DOWN. The former is defined as 'to bring down prices, the rate of inflation, the cost of living etc.' (OALD) and the latter as 'to bring someone/something to a lower level or standard' (NODE), which is not the most accurate definition given that it makes no explicit mention of either decrease or poor performance.[33] However, their target semantic content is subject to straightforward and effortless interpretation due to their connections with the underlying DOWN image-schema and the conceptual mappings as discussed in this section.

[33] The use of source language vocabulary in the definitions of target senses (cf. 'to bring to lower level') constitutes a kind of circularity which should be avoided in dictionary entries.

Furthermore, the lemmas SLIDE and SLIP (examples 45, 46) deserve a word of explanation in this discussion, as their connections with the domain of DOWN orientation may not seem to be obvious at first sight. The verb slide is defined by NODE as 'to move along a smooth surface while maintaining a continuous contact with it'. This definition does not have much to do with downward orientation and as such cannot be considered as a motivation for the well-established target sense of 'a decline in value or quantity' or 'to change to a worse position' (NODE). What seems to provide the motivation is the nominal use of 'slide', which denotes 'a structure with a smooth sloping surface for children to slide down' (NODE). Thus, in this case the nominal lexeme is extended to the verbal one, which functions exclusively as an indication of downward business trends and as such can be regarded as part-of-speech extension by our definition. To SLIP, on the other hand, is defined as 'to slide unintentionally for a short distance, typically losing one's balance or footing' (NODE). Although this definition does not mention downward motion explicitly, it is our common knowledge that losing balance typically results in *falling down*. It is this inference that appears to provide a link between the source and target senses of this lemma. A mention should also be made at this juncture of CRASH, which has an established position within the domain of business activity, denoting 'a sudden disastrous drop in the value or price of something, especially shares' and 'the sudden collapse of business' (NODE). It seems that the source of these meanings lies not in the most prototypical meaning of 'crash', which is a collision of two or more vehicles but rather in its more specialized use denoting an airplane crash, which of course entails downward motion.

It is also worth observing that of all the lemmas discussed in this section only the target sense of DIVE (a fall in prices or profits) has been marked as a figurative use. This shows that in most cases the metaphorical underpinnings of target senses have become obliterated in the course of time.

6.4. Motion scenario

The heading of *motion scenario* has been employed as a generic term under which a number of different but related *subschemas* have been grouped. Here is the resultant conceptual map as evoked by particular key lemmas (the prototypical values of each subschema have been given in brackets).

a. *Lack of motion* (-) [HALT, STANDSTILL, SEIZE, STALL, REIN IN
b. *Setting into motion* (+) [JUMP-START]
c. *Forward motion* (+) [ADVANCE, SURGE, PROGRESS, move/ go /finish / end / close AHEAD, make HEADWAY]
d. *Increase in speed* (+) [GATHER/ STEP UP PACE, ACCELERATE, SPUR, GAIN MOMENTUM]
e. *Quick forward motion* (+) [steam/ power AHEAD, MOTOR/ RACE/ SPEED/ ROAR, LIVELY/ HECTIC PACE]
f. *Race/ front (+)* [OVERTAKE, GAIN GROUND, CATCH UP ON]

g. *Decrease in speed/ staying back/ slow motion* (-) [SLOW, SLOWDOWN, LOSE MOMENTUM, LAG, SNAIL'S PACE, RUN OUT OF PUFF, CREEP AHEAD
h. *Backward motion* (-) [RETREAT, PULL BACK, SETBACK, LOSE GROUND]

CORPUS EXAMPLES:

56. AMSTERDAM powered ahead, rising 17.15 or 3 per cent to 583.66 on the AEX index, with an 8.4 per cent advance at electronics giant Philips supplying much of the day's gain.
57. Vigorous consumer spending and booming business investment helped fuel the strongest surge in the US economy in more than two years.
58. Despite AXA's unhappy debut, other continental European companies made spectacular progress, reflecting the realignment of corporate communications (…)
59. After all, most cable companies have been quietly trying to get out of telephony after failing to make much headway since deregulation.
60. AMD has gained ground recently against Intel in the US retail PC market (…)
61. SAP recovered a little of the ground lost on Wednesday, when it produced disappointing 1998 results, to climb 14.50 to 313.50.
62. Not so long ago there was heady talk of 3 per cent growth, after perhaps 2.8 per cent in 1998, but the eurozone's economy seems to be hitting the buffers this quarter. It may accelerate later in the year, helped by interest rates which appear certain to fall significantly below 3 per cent. Or will it?
63. World markets stepped up the pace of their new year rally yesterday with Wall Street heading into record territory in early trading and European bourses surging ahead.
64. The international bond markets maintained their lively pace yesterday with a number of large dollar offerings. The markets had been buoyed by a rally in (…)
65. For the first time in its history, GM is having to adapt to the challenge of globalisation in a bid to catch up with competitors that have overtaken it, if not in size, then in effectiveness.
66. (…) while Spain is being asked to accept large cuts in the "cohesion" funds it receives to catch up other economies in the euro-zone.
67. Third sector businesses were set up in the 1980s and early 1990s as a way to spur economic activity (…)
68. Most London markets were slow yesterday, re-opening after the four-day break for Easter.
69. The country's central bank said a slowdown in inflation allowed it to cut interest rates, for the second time in two weeks, to 39.5 from 42 per cent.
70. Following the Russian crisis, financial markets in the US seized up.
Issuance in the main corporate bond markets came to a virtual standstill in September and October last year, and only recovered after three cuts in rates by the Fed. Continental Europe, where the euro-zone countries are running a Dollars 100bn (Pounds 59.5bn) current account surplus, cuts interest rates at a snail's pace and shares too little of the burden of the Asian crisis relative to the US.
71. Asia has bottomed out, he says, the euro-zone countries should be picking up by the late fourth quarter, and metal prices should benefit regardless of whether the US economy grows or stalls.
72. Tight monetary policy will rein in UK economic growth this year, according to a forecast from the Economist Intelligence Unit.
73. Ann Robinson, consortium director-general, said there was evidence the consumer economy may have come to a halt.
74. To date, the assumption in the market has been that a sluggish German and Italian economy would be insufficient to induce another easing in rates.
75. The government has enacted a series of measures to jump start the slowing economy and halt a sharp decline in share prices.
76. If share prices have lagged in the past year, its partly because investors question whether managements can deliver the added returns they promise.

77. The market has pulled back 50 points since, but this has been put down to profit-taking and a reaction to falls on Wall Street.
78. The prospect of a rise in US rates, with its implications for Wall Street, has been responsible for the FTSE 100's retreat from its closing record of 6,620.6, recorded on July 6, and which saw the index briefly drop back below the 6,000 level.
79. The setback in the leading stocks was the first since the near 200-point retreat by the Footsie almost two weeks ago (…)
80. London stock market's leaders finally run out of puff and back off from the elevated levels that drove the two main FTSE indices to record highs.
81. That should cool off the pace of growth somewhat, but the data suggest the economy still has a powerful underlying momentum that may not easily succumb to a modest tightening in monetary conditions.
82. Many stock sectors opened sharply higher and gained momentum through the final hour of trading.
83. The chief casualties have, inevitably, been weaker brands which were already losing momentum.
84. Vardy speeds ahead thanks to fast turnover.

The conceptual map of the MOTION scenario includes various experiences associated with our basic motor activities. The most conspicuous appears to be the FRONT schemas capturing various aspects of FORWARD MOTION, such as SETTING INTO MOTION, INCREASE IN SPEED, QUICK FORWARD MOTION, SLOW MOTION/ DECREASE IN SPEED. However, the map also includes the opposite experience, i.e. LACK OF MOTION, which provides an indispensable point of reference for our understanding of motion events. Also, a few correlates of the BACK schema capturing our experience of backward motion have been traced in the corpus data.

Each of these source domains has been assigned either plus or minus value on the basis of the experiential correlations they are involved in. Thus, as Krzeszowski (1997: 114) points out "FRONT has a definitely positive value because the fundamental experience connected with this orientation is the experience of human face, the most representative part of human body." Conversely, the rear parts of our bodies are "less representative of us as human beings" (Krzeszowski, 1997: 115). These and some other correlations seem to provide the motivation for the axiological metaphors FRONT/FORWARD IS GOOD and BAD IS BACK/BACKWARD. Furthermore, the negative axiology of the experiential domain of SLOW MOTION can be traced back to the bodily state characterized by lack of vitality, vigor or energy, which coincides with poor physical condition of living organisms. By the same token, the state of rest, or in other words a LACK OF MOTION, is indicative of bodily states, such as being ill or being dead. Thus, LACK OF MOTION and SLOW MOTION represent negatively charged domains at the experiential level. MOTION, and especially QUICK/ENERGETIC MOTION, on the other hand, can be seen as a manifestation of physical strength, liveliness, or vitality. Furthermore, the quantitative metaphors which structure the target domain of business activity, that is MORE IS FORWARD and LESS IS BACKWARD appear to be grounded in the experiential correlation between the direction of motion and the amount of distance covered. More specifically, moving forward, we cover *more* and *more* of a path; moving backwards, on the other hand, we gradually *reduce* the distance already covered.

Each of these subdomains of the motion scenario, as presented above, has its own unique function to perform under metaphorical mapping onto the target domain. Hence, the target meaning arising from the source domain of FORWARD motion is that of *increase* in the intensity of business activity or share value (examples 56, 57, 61), whereas BACKWARD mo-

tion gives rise to the target concept of *decrease* in quantity or value. (examples 77, 78, 79) These two senses tend to be further elaborated on by means of the pace metaphors MORE IS QUICK and LESS IS SLOW, which give rise to the target concept of increase/decrease by *larger* or *smaller* amount respectively. Accordingly, the key lemmas such as POWER AHEAD, and SPEED AHEAD suggest *a substantial* increase in share value (examples 56, 84) while the notion of SNAIL'S PACE as exemplified in (70) points to a *small* reduction in value. SLOW and QUICK motion schemas should, in turn, be seen in a broader context of BACK and FRONT image-schematic structures in that quick motion typically situates a moving entity in front of other moving entities, whereas slow motion leads to lagging behind others. These correlations are best reflected in the lemmas put under the heading of RACE: OVERTAKE, GAIN/MAKE GROUND ON, CATCH UP WITH. The source senses of these items (being in front of sb/sth, or reaching sb/sth in front of you) tend to be projected onto the notion of business competition. Simply put, being in *front* means being or doing *better* than one's business rivals (examples 60, 65, 66). Being in the *back*, on the other hand, extends to the axiological notion of poor business performance, i.e. doing *worse* than one's competitors. This finds its reflection in the semantics of lemmas such as LAG, LOSE GROUND, RUN OUT OF PUFF, LOSE MOMENTUM (examples 61, 76, 80, 83). Finally, LACK OF MOTION subschema maps onto the target concept of *economic stagnation* or *slump* (examples 70-73), whereas the single lemma ascribed to SETTING INTO MOTION subschema i.e. JUMP-START, draws on the analogy between a broken car and the poor condition of a country's economy. Setting the car into motion is here tantamount to restoring it to working order, which in turn, correlates with the target notion of attempting to *improve* economic performance (example 75).

As far as the axiological aspect of the target domain is concerned, the general pattern is that the experiential domains of FORWARD and QUICK motion are the sources of positively charged meanings such as business expansion, economic progress, improvement in the functioning of particular business institutions/markets/sectors (examples 58-59; 62-64). BACKWARD and SLOW motion schemas, on the other hand, give rise to negatively valued phenomena such as lack of progress, decline in business/economic activity, or economic recession (examples 68-69; 77-79). Thus, in all these cases the prototypical values assigned to particular source domains are preserved under metaphorical mappings. However, some instances of a reverse axiological transfer have also been traced in the data. As in the other cases of this kind, also here the actual valuation assigned to a relationship profiled by a verbal predication depends on the actual values of the TR entities. More specifically, the minus TR incorporated into the prototypically positive FORWARD schema gives rise to negative actual values. Consider (85):

> 85. Mr Klaus inspired *a debt-finance* TR/ (-) surge which ended in a currency crisis in mid-1997 and in political turmoil. [-]

The negative TR slotted into the SLOW motion schema, on the other hand, reverses the absolute minus axiology ascribed to this schema, as illustrated in (86).

> 86. The country's central bank said a slowdown in *inflation* TR/(-) allowed it to cut interest rates, for the second time in two weeks, to 39.5 from 42 per cent. [+]

BACKWARD motion schema has not been found to be subjected to any reversal of values, which is to say that it invariably preserves its minus axiology under metaphorical mapping.

NODE tends to recognize the extended nature of the quantitative or/and axiological meanings of the key lemmas, listing them as subsenses of the spatial meanings. For example, this is the case in entries for ADVANCE, SURGE, AHEAD, ACCELERATE, OVERTAKE, RETREAT, all of which have been defined in quantitative and/or axiological terms.

However, there are also quite a few items, whose target meanings have not been found in the dictionaries consulted. As could be expected, they include mainly phrasal items: SNAIL'S PACE, SEIZE UP, LOSE GROUND, LOSE/GAIN MOMENTUM, PULL BACK, RUN OUT OF PUFF. Also, a few instances of sense blending have been identified. For example, HEADWAY is defined by NODE as "forward movement or progress". By the same token, HALT is defined as "a suspension of movement or activity typically a temporary one" (NODE). The examples that follow clearly point to sense blending: "a halt in production; a bus screeched to a halt". The same concerns LAG which is defined as "fall behind in movement, progress, or development; not keep pace with another or others" (NODE). Also, the definition for LAG only approximately matches the uses found in the corpus and provides a good illustration of the high degree of circularity found in the way dictionaries handle metaphorical meanings. That is, the notion of "falling behind in progress" found in NODE's entry is a good example of sense blending and also shows a high degree of entrenchment of the spatial construal of the notion of development or progress. A similar type of circularity is found in the PACE entry: "the speed or rate at which something happens, changes, or develops".

Finally, a mention should be made of the morphological processes involved in deriving the key lemmas. The most obvious is of course compounding, represented by SLOWDOWN and SETBACK, both of which have a terminological status in business/economic discourse. The former combines two spatial schemata in order to convey the target concept of a decline in economic activity. SETBACK, on the other hand, combines the BACK spatial schema with a general concept of putting something in a particular place in order to give us a handle on the concept of a fall in prices (on a stock or financial markets). Additionally, SETBACK, can be classified as a morphological sense extension by our definition, as no source domain correlate can be found in English (as opposed to SLOWDOWN which can denote an act of slowing down).

6.5. Strength & weakness

The following aspects of the experiential domain of STRENGTH and WEAKNESS are highlighted under metaphorization:

a. *Having a lot of physical power* (+)
   [STRENGTH, STRONG]
b. *Having little physical power* (-)
   [WEAKNESS, WEAK, WEAKEN]

CORPUS EXAMPLES:

87. He predicted profitability would remain strong because of a further likely rise in market share (…)
88. These figures are still higher than normal for periods of economic strength, mainly because of the rise in personal bankruptcies.
89. Car stocks were weak after their recent speculative advances.
90. Small company shares weakened, sending the Russell 2000 index down 1.58 to 423.75.
91. Economists blame the drop in factory gate prices on economic weakness in Asia and the strength of sterling, which together have eroded the competitiveness of UK exporters overseas and made imported goods cheaper

The source concepts of physical strength and weakness get mapped onto the domain of business performance via MORE IS STRONG and LESS IS WEAK metaphors. These mappings appear to derive from the following correlations in experience: the *more* energy or power one has, the stronger one is, and conversely, the *less* strength one has, the *weaker* one is. However, another explanation is also possible, and it is related to our common construal of physical *strength* or *weakness* in terms of *large* and *small* body size, respectively. A shorthand way of capturing this is a simple formula: the bigger the stronger, the smaller the weaker. Also, the prototypical axiology of the source domains under investigation seems to be clearly delineated in that physical strength is typically conceived of as a sign of good health, well-being, vitality, etc. Physical weakness, on the other hand, typically correlates with negative aspects of our bodily functioning such as poor health, tiredness, lack of vigor, etc.

The semantic extensions of the source domain of STRENGTH onto the domain of business activity typically involve simultaneous activation of MORE IS STRONG and GOOD IS STRONG conceptual metaphors. This, in turn, gives us a handle on the target notion of successful business performance, which is typically expressed in quantitative terms, e.g. as an increase in profits or business activity (examples 87, 88). The WEAKNESS domain, on the other hand, is extended onto the target domain via the combination of LESS IS WEAK and BAD IS WEAK metaphors, which gives rise to the overlapping concept of poor performance and a reduction in value/quantity/intensity of business activity etc. (examples 89-91).

While in most cases the prototypical axiology of STRENGTH and WEAKNESS source domains is preserved under the mapping onto the target domains, some instances of the reverse transfer can be found. However, this reversal applies mainly to currency values in that weak currencies might be perceived as an advantageous phenomenon, while strong currencies may be seen as contributing to a financial loss. This is illustrated in (92) and (93): [34]

92. The cost advantage for Asian suppliers stems from their lower labour costs, modern plants and *weak currencies* (TR)/(n), following devaluations in the region. [+]
93. Meanwhile, Ishidawajima-Harima Heavy Industries warned it would probably post a loss this year, because of the *strong yen* (TR)/(n) and unprofitable overseas projects. [-]

[34] STRONG IS BAD and WEAK IS GOOD concepts do seem to have some (albeit not unambiguous) experiential basis in that physical strength tends to be associated in our culture with shortage of intellectual capacities (e.g. the stereotype of a muscular macho); weakness, on the other hand, might be perceived as a manifestation of some positive aspects of the woman's personality such as femininity, tenderness, softness etc.

As can be inferred from the relevant dictionary entries the notions of strength and weakness have achieved a prominent status within the field of business/economics. NODE's entry for STRONG includes two highly relevant references listed as subsenses of the core meaning (2). One subsense brings into focus the general notion of *financial stability*, while the other refers specifically to *high* or *rising share prices*. The latter definition, however, seems to be slightly too restrictive in the face of the corpus data, which show that the notion of weakness relates to various items, not only prices (cf. example 87). As for the nominal lexeme STRENGTH, NODE does not make any explicit references to the domain of quantity or business/economic performance in its extensive listing of the relevant subsenses. However, this omission can be treated as a case of sense blending, especially if we take a recourse to other dictionaries. LDOE, for example, defines *strength* as "the quality or degree of being strong or powerful" and provides some examples that clearly mingle the physical and value-related notions: "He does weight-training to build up his physical strength, the current strength of dollar." Finally, NODE's entry for WEAK provides some relevant references. Particularly relevant are the subsenses of the core meaning (2), which bring to light the business/economic context of use of this item, i.e. insecure financial position and downward market trends. The nominal and verbal entries do not contain any relevant references, yet the examples provided (especially by OALD) show that some degree of sense blending occurs in these entries.

6.6. Health & illness scenario

Physical condition of living organisms has turned out to be another productive source domain giving us a handle on the target notions of successful and poor business performance. This broad domain incorporates a very diversified experiential input, which can be organized into a few *subdomains*, as listed below:

a. *Physical condition of the body*: SHAPE
b. *Well-being*: IN GOOD SHAPE, HEALTHY, ROBUST, VGOROUS
c. *Indisposition*: UNHEALTY, AILING, SICK, ILL-HEALT, SUFFER, PAIN, ANAEMIC, PNEUMONIA, SNIFFLE, HAEMORRHAGE, LIMP, IN BAD SHAPE
d. *Treatment*: REMEDY, POISON PILL, MEDICINE, INJECT, COMPANY DOCTOR
e. *Recovery*: RCOVER, RECOVERY, RALLY, ON THE MEND

CORPUS EXAMPLES:

94. As the IFS report points out, government finances are now in <u>good shape</u> and there is a fair chance that its fiscal and inflation targets will be hit for the next three years.
95. While the American economy ended 1998 in much the same condition it started the year - rude <u>good health</u> - should the latest financial crisis turn into a full-blown Brazilian slump, the damage to the US and the world could be much more serious.
96.The All-Share index produced a <u>healthy</u> return in the fourth quarter (…)
97. "Now they are looking for operating profit growth of 40 per cent. That is a <u>healthy</u> performance but lower than previous expectations."
98. The best shock absorber for Europe would be the creation of a <u>robust</u> economy and a gradual return to full employment.

99. Luxury sales have remained robust in North America and western Europe
100. The difference this time is that the domestic economy, the corporate sector in particular, is in worse shape
101. Last week one of the reliable perennials, Marks and Spencer, showed signs of ill-health.
102. The cost-cutting drive at AT&T helped the largest US telecommunications company to meet Wall Street's expectations with a 45 per cent increase in operating earnings in the final months of last year, despite an anemic 0.4 per cent growth in its core long-distance business.
103. The Rover headache is a serious blow to BMW's 1998 profits. Rover's sales have been falling and the strong pound has made exports less profitable.
104. DFS Furniture was also a heavy faller. The previous year's windfalls had boosted consumer spending on such lumpy discretionary items as furniture and carpets, creating a bad hangover in 1998.
105. Analysts say the industry suffers from too many banks, a lack of transparency, the government's failure to privatise unhealthy state-owned banks (…).
106. Japan's investment bankers have just had a bloody year. And 1999 could deliver yet more pain.
107. As the markets limped through the fourth quarter, the main subject of conversation was the unprecedented collapse in trading volumes.
108. However, the ministers acknowledged that Brazil's troubles were likely to hurt some private companies with substantial business interests in Latin America, particularly if financial sickness spread to Argentina and other South American countries.
109. But in the longer term the sickly state of the UK economy, and the threat of portfolio shifts out of sterling into the euro, mean that the pound could face a rocky few months.
110. His views are echoed by David Aaron, of the independent financial adviser David Aaron Partnership. “We are not recommending Gibs,” he says. “Rates are very, very sick”.
111. But while software group Oracle has caught pneumonia, Intel, one of the industry's bellwethers, seems to have escaped with a sniffle.
112. Prescribing medicine for corporate ills: COMPANY DOCTORS by Emiko Terazono:
113. Analysts argue that the only remedy is for mining companies is to cut their output
114. Mr Jungels said the merger was not intended as a poison pill to deter other companies from launching a hostile bid for Enterprise.
115. The real estate sector was the strongest performer of the day after reports that Japan's ruling Liberal Democratic party was considering injecting Y20,000bn into the ailing real estate market.
116. Rebuilding confidence in a company through crisis management is the main task for a company doctor. A successful company doctor will manage to bring about the essential ingredients of a turnaround.
117. “You have a steel industry haemorrhaging with the flooding of our markets with foreign dumped steel, causing the loss of thousands of jobs, and the administration is applying a small Band-Aid,” said Republican senator Arlen Specter, chairman of the Senate steel caucus.
118. “The discussion implied that the crisis was now on the mend,” said Andrew Crockett, general manager of the Bank for International Settlements
119. Some of the biggest internet stocks continued to recover from the sharp falls they suffered last week
120. Philips rose 2.45 to 65.65 and the fierce rally at Baan continued apace.

As shown by the key lemmas and the examples, the target notions of successful and poor business performance tend to be conceptualized in terms of signs of good or bad health respectively. The former is evoked by lemmas such as HEALTHY, ROBUST, VIGOROUS or some phrasal items, e.g., IN GOOD HEALTH/ SHAPE (examples 94-99). It should be noted that in the case of ROBUST and VIGOROUS, the general notion of good health is additionally

reinforced by that of strength and energetic behavior. In other words, being healthy means having *a lot* of strength and energy. This experiential correlation is, in turn, mapped on to the quantitative domain giving rise to the target notion of *satisfactory* quantity/amount (example 99). The same correlation seems to underlie the semantic extension of HEALTHY, which apart from the general axiological meaning of successful performance (example 98), also has the quantitative sense as exemplified in (97).

PHYSICAL INDISPOSITION subdomain is instantiated by a range of items with more or less specific reference. Thus, there are items which make a general reference to poor state of health, such as UNHEALTHY, AILING, SICK, ILL-HEALTH, SUFFER. However, more specific ailments such as SNIFFLE, PNEUMONIA, HAEMORRAGING, HAENGOVER, HEADACHE have also found their way to business discourse. The former get extended to the general notion of poor business/economic performance (examples 101, 105, 109, 110, 115), the latter on the other hand, serve the function of highlighting certain more specific aspects of this broad axiological domain. For example, PNEUMONIA and SNIFFLE have been brought together in a single sentence to emphasize the discrepancy in the gravity of financial difficulties, as experienced by the two companies (example 111). Furthermore, the loss of blood inherent in the notion of HAEMORRAGING corresponds to the loss of *valuable people or resources* which are as vital for the successful functioning of businesses as is the blood for the functioning of living organisms (example 117). Next, the notion of HANGOVER activates the ontological correspondence between the painful *aftereffects* of drinking too much alcohol and the negative *consequences* of a spending spree. Thus, the unpleasant repercussions of an otherwise enjoyable activity have been brought to light with this metaphor (example 104). The lemma ANAEMIC also deserves a mention here. Its quantitative meaning (example 102) can be traced back to the source notion of *shortage* of physical strength or energy which manifests itself in the target domain as *unsatisfactory amount or value.*

It should be noted at this point that only four out of the twelve lemmas listed under the heading of IDISPOSITION domain have been recognized by dictionary compilers as having quantitative or/ and axiological senses – these are SUFFER, SICK, HEADACHE, HEMORRHAGE. The remaining items have been defined only in medical or physical (bodily) terms, which testifies to their lower entrenchment in business discourse.

The lemmas grouped under the TREATMENT heading bring into focus the central notion of *counteracting undesirable business/economic phenomena*. For example, REMEDY and MEDICINE metaphors (examples 112, 113) allow us to conceptualize different means of solving financial problems in terms of substances used in curing diseases.[35] By the same token, the notion of INJECTION is extended to target sense of *provision of financial resources* to business institutions, typically those experiencing some financial difficulties (example 115). What is highlighted here is the remedial effect of a medical substance injected into the body of a patient, which corresponds to the beneficial effects of financial support given to a business institution. Furthermore, the phrasal item POISON PILL represents and interesting case as it combines the minus (poison) and the plus (pole) pole of the axiological scale. This, in turn, is reflected in the target semantics of this collocation, which, on the one hand, denotes reme-

[35] It should be noted that REMEDY has turned out to be much more conventional or entrenched than MEDICINE, the latter occurring on a more idiosyncratic basis.

dial measures taken by a company to avoid a hostile bid, but on the other hand, suggests that these measures are bound to have a bad effect on the functioning of this company. Another phrasal item associated with the subdomain of TREATMENT is the lemma COMPANY DOCTOR, which has not been traced in any of the reference works, however the corpus itself has provided a relevant definition (see example 116).

The final stage of our scenario is the state of *returning to health after an illness*. Its target domain counterpart can be specified as *returning to the state of effective functioning or prosperity* after a period of financial collapse. Among the lexical correlates of this domain, one can find RECOVERY, which has a well-established position in economics and finance discourse, denoting "a rise in the buying and selling of shares or of the economy" (NODE), especially after a prolonged fall in value. Another lemma listed under this heading is RALLY, defined by NODE as "(of share, currency, or commodity prices) increase after a fall." This sense of RALLY appears to represent an indirect metaphorical transfer in that it derives not from the core meaning of 'rally', as used in military context, but from one of its subsenses relating to recovering one's health or spirits. Thus, the notion of RALLY, as used in economics and finance, is an extension of a sense, which itself is a metaphorical extension. The last item on our list – ON THE MEND is closely related in meaning to RECOVERY and RALLY. However, it represents a more creative (less entrenched) instantiation of the recovery metaphor, as none of the dictionaries consulted relates it specifically to the domain of finance or economics. Providing more creative substitutes for well-entrenched or established concepts appears to be a stable tendency in economic discourse. Anothe example of this tendency is ROBUST and VIGOROUS: while the former is marked as a terminological item in lexicographical resources, the latter is defined mainly in relation to bodily health and energy.

It is also interesting to observe that only some target meanings have been labeled as figurative by dictionaries compliers. For example, the target meanings of HEALTH and SICK are marked as figurative by NODE, which mentions the notions of 'financial health' and 'financial problems', in the respective entries. Uses like these appear to represent an intermediate stage between the full conventionalization of metaphorical meanings (as observed, for example, in the case of HAEMORRHAGE and ROBUST), and more creative uses, which remain unaccounted for by lexicographical resources.

Finally, it should be observed that each of the subdomains of the HEALTH/ILLNESS scenario, as discussed in this section, is characterized by either positive or negative axiological load which is invariably preserved under metaphorical transfer onto the target domain of business/ economic performance. This can be sketched out as follows:

Physical condition		Financial condition
1. PHYSICAL WELL-BEING (+)	→	SUCCESSFUL BUSINESS PERFORMANCE (+)
2. PHYSICAL INDISPOSITION (-)	→	POOR BUSINESS PERFORMANCE (-)
3. TREATMENT (+)	→	IMPROVING BUSINESS PERFORMANCE (+)
4. RETURN TO HEALTH (+)	→	RETURN TO EFFICIENT FUNCTIONING (+)

Fig. 6.11. Mappings from physical condition to financial condition

6.7. Violent behavior scenario

The inspection of the corpus data has revealed a number of lemmas denoting various acts of violent behavior, which provide a means for understanding various aspects of poor business performance. Most of these lemmas evoke an image of a victim of different acts of violence:

- HIT, BRUISED
- (take, feel a) BRUISE
- BATTERED/ HURT/ KNOCKED/ STRIKEN
- (suffer, take a) BLOW
- TAKE POUNDING/ TAKE A TOLL ON
- CASUALTY

CORPUS EXAMPLES:

121. Share prices were also hit as Northern Rock, the former building society, said it was considering scrutinizing part of its mortgage portfolio.
122. Car stocks were bruised by renewed concerns over developments in Brazil (…).
123. Brazil's battered currency took another blow on Wednesday as an interest rate increase by the central bank failed to convince nervous currency traders.
124. Although recession and higher taxes will hurt company earnings, the market seems to feel that the suffering will be worth the price if it brings.
125. Japanese share prices take pounding.
126. A profit warning from RMC knocked the shares almost 8 per cent or 59 to 693p after the construction group highlighted troubles in Germany.
127. The emerging markets crisis, while taking its toll on Asian sales, did not affect sales in Russia, which grew 25 per cent to 2,500.
128. Meanwhile the stricken Japanese economy shows no signs of emerging from its troubles.
129. The chief casualties have, inevitably, been weaker brands which were already losing momentum.

What is highlighted under metaphorization here is suffering caused by different acts of violent behavior, with business institutions being presented as the injured party (casualties). In other words, business/ economic underperformance is conceptualized in terms of physical injuries or pain suffered by a victim of violence. It should be also observed that the target concept of poor business performance is typically expressed in quantitative terms, that is as a reduction in value, quantity or intensity of business activity. This relationship between the source domain of physical injuries and the target one of quantity or value can be traced back to the experience of having *little* energy or physical strength that typically characterizes the injured party. The correspondences between the two domains under discussion is presented in the diagram below:

SOURCE DOMAIN (-)		TARGET DOMAIN (-)
PHYSICAL INJURIES	→	adverse business/economic phenomena reduction in value/quantity/business activity
VICTIMS OF VIOLENT BEHAVIOUR	→	companies, markets, economies badly affected by adverse phenomena

Fig. 6.12. Mappings from physical injuries to business performance

It should be noted here that the negative valuation associated with the source domain of violent behavior is preserved under metaphorical mapping onto the target domain, no instance of *the reverse transfer* having been yielded by the corpus.

The dictionaries consulted tend to recognize the conceptual link between the source domain of physical injuries and the target axiological concepts, which are typically granted the status of subsenses,[36] as can be judged by the vocabulary employed in the relevant entries e.g., 'be affected by unfortunate circumstances' (HIT), 'detrimental effect' (HURT), 'disappointment' (BLOW), 'harmful/damaging effect' (STRIKE), or 'setback' (KNOCK). As can be seen, some of these explanations represent examples of sense blending (cf. harmful/damaging effect), whereas others only approximately match the corpus uses (cf. 'disappointment' meaning of BLOW, which clearly personifies business institutions). The items that have not been accounted for by reference works include TAKE A POUNDING and BATTERED, which represent more creative extensions of the well-established concepts denoting negative consequences experienced by someone or something. Also, the nominal and verbal forms of the lemma BRUISE remain unaccounted for. However, it is interesting to note that NODE mentions its adjectival form BRUISING, marking it as a figurative meaning and providing a definition which approximately matches the corpus uses: "*figurative* (of an antagonistic or competitive situation) conducted in an aggressive way and likely to have a stressful or damaging effect on those involved." The label of figurative use is also attached to CASUALTY: "(figurative) a person or thing badly affected by an event or situation." (NODE). This shows that some of the concepts derived metaphorically from the domain of violent behavior are considered as fully conventionalized (e.g. HIT, HURT), while others are still in a transitional state.

6.8. Emotional/mental states

Emotional/mental states provide another source of axiologically charged concepts found in business discourse. Both positive and negative emotions are subjected to metaphorical mappings onto the target domain of business performance. The mapping are activated by the following lemmas:

a. *Positive emotional states*: CHEERFUL, ENLIVEN, PERK UP
b. *Negative emotional states*: DEPRESS, TROUBLED, DISTRESSED, UPSET, LISTLESS, SUBDUED, SOUR THE MOD

CORPUS EXAMPLES:

130. "The market's been depressed all day," he said. "It tried to rally, but couldn't get above $282.00."
131. The move will further depress the property and finance sectors just as doubts abound about the outcome of this week's land auction.
132. Exuberant Helped by the strong early tone on Wall Street and a cut for interest rates in Brazil, Latin America was looking its most cheerful for some weeks. At the close of morning trading, the benchmark benchmark Bovespa equity index in Sao Paulo was up 5 per cent.

[36] The single exception is the lemma STRIKEN, whose target meaning(*damaging effect*) has the status of a separate (core) meaning in NODE.

133. He is expected to outline the government's policy for the country's troubled economy and its financial sector in particular.
134. Lasmo said a proposed link-up with Enterprise was among “a number of strategic initiatives” under review by the group, whose share price fell last week to a 12-year low amid rumours that it is financially distressed, an allegation vehemently denied.
135. Key administration officials, led by Robert Rubin, the powerful treasury secretary, have argued firmly against tough unilateral action because of the danger of upsetting the delicate economies of Asia and angering trading partners.
136. TORONTO was higher after a subdued morning's trade, enlivened by activity in the pharmaceutical and high-technology sectors.
137. Bond markets were listless on Thursday in the final day's trading of 1998.
138. The other FTSE indices also perked up after a rather sluggish start.
139. Analysts noted that the currency touched a new record low against the dollar briefly during the afternoon, which had further soured the mood.

As can be seen business entities such as markets, economies, stocks tend to be personified, i.e. they are ascribed the human quality of being able to experience positive or negative feelings. There is a straightforward axiological transfer between the source and the target domains in that that positive emotions are extended onto the target domain of *positive* or *desirable* business/economic phenomena (examples 132, 136, 138), whereas the negative emotions are projected onto the target domain of *poor business performance* (examples 130, 131, 133-135, 137, 139). The quantitative aspect is also present in the conceptualization of the target notions in that successful and poor business performance are typically conceived of as, respectively, rising and falling business/economic trends. This conceptual link between the source domain of emotional states and the target one of quantity or intensity can be traced back to the experiential correlation between *feeling good* and an *increase* in vitality, on the one hand (when we feel good we have *more* energy and we are *more* active), and *feeling bad* and a *decrease* in vitality, on the other (when we feel bad we have *less* energy and we are *less* active). The former correlation is particularly perspicuous in the semantics of ENLIVEN and PERK UP (examples 136, 138), whereas LISTLESS and SUBDUED seem to be manifestations of the latter correspondence (example 136, 137). The diagram below summarizes the axiological mapping between the two domains.

SOURCE DOMAIN		TARGET DOMAIN
FEELING GOOD (+)	→	Successful business performance (+) Increase in value, intensity of business activity (+)
FEELING BAD (-)	→	Poor business performance (-) Decrease in value, intensity of business activity (-)

Fig. 6.13. Mapping from the domain of emotional states to business performance

As regards the dictionary status of the lexical items under discussion, most of the target senses as traced in the corpus have not been accounted for by any of the reference works consulted, which points to a low degree of their conceptual entrenchment. An exception is the lemma DEPRESS whose quantitative meaning has been recognized by both general and more specialized dictionaries (cf. NODE and ODBE). The item has achieved terminological status within the

field of economics and finance and is defined by ODBE as "period with very little economic activity". A separate explanation is provided for *depressed market* – "a market where there is little demand for the products or services offered for sale." (ODBE). Thus, both definitions highlight the quantitative aspect of the target notion of unsuccessful business performance.

6.9. Metaphorical clusters

In the sections above our focus has been mainly on single lexical items or fixed expressions that evoke particular image schematic structures. However, the corpus data provide instances of key lemma clusters which form more extended stretches of metaphorical language. This phenomenon will be referred to as *metaphorical clustering* in the present study. Two types of metaphorical clustering have been distinguished, i.e. *consistent* and *inconsistent* metaphorical clusters, as defined and illustrated below.

- Consistent metaphorical clusters – these are clusters which consist of lemmas deriving from the same or conceptually related image schemata e.g.

140. Many of the companies already present in the 1997 list have also climbed significantly higher in the rankings.
141. The shares rose steadily to reach a peak of 550p inn May 1996
142. TORONTO was flat at midsession although its gold producers climbed in step with a modest rise in the bullion price.
143. After a decade of in-market consolidation in the US banking industry, some of the giant institutions that have emerged at the top of the heap are starting to raise their eyes to the hills.

All the above clusters consist of lexical items associated with UP image schema. As these examples show, the clusters are characterized by different degrees of conventionality or, different levels of conceptual entrenchment. For example, the cluster in example (140) seems to be a case of more conventional language use than the cluster in (143). This, in turn, is best accounted for in terms of the theory of prototypicality as applied to image schematic structures. More specifically, particular image schemas can be represented by more or less prototypical notions, which results in more or less conventional linguistic expressions arising from them. Looking at examples (140) and (141), the straightforward observation to be made is that items such as CLIMB and HIGHER are more central members of UP image schema than HEAP and HILL, which seem to occupy more peripheral areas of the schema in question. The same phenomenon clearly shows in the case of the metaphorical extensions of DOWN schema. Consider (144)-(146):

144. (…) only to see the price fall to a low of 33p last February.
145. The real dropped immediately to the bottom of its new band of R dollars 1.20-RDollars 1.32.
146. Peter Salsbury announced a surprise profits warning and gave details of Christmas trading so dire that some pundits were left wondering whether the flagship of British retailing had finally been sunk.

Thus, example (144) and (145) seem to be more conventional than (146), since they activate more central dimensions of DOWN schema (FALL, LOW, DROP, BOTTOM), than the latter (FLAGSHIP, SINK), which evokes a more specific but also more picturesque imagery.[37]

As has been noted earlier, there are schemas which are naturally related to one another at the experiential level, such as, for example, UP and DOWN, schemas (cf. 6.2, 6.3). Consequently, they tend to merge under metaphorical mapping, which can be illustrated as follows:

147. (…) shares falling from a high of 774p to the 565p at which they now trade.
148. GM's share of new car sales has slipped from a peak of 50.7 per cent in 1962 to about 30 per cent today.
149. National Savings fell off its perch at the top of the savings ladder last year.
150. The economy is not about to fall off a cliff (…).

The above examples show that the natural conceptual bond holding between UP and DOWN schemata is preserved under metaphorical mapping, which gives rise to a number of different metaphorical expressions. The prototype effect applies here in the same way as in the cases presented earlier. Thus, clusters (147) and (148) employ more central members of DOWN and UP image schemas (FALL, HIGH, PEAK, SLIP) and as such constitute more conventional metaphorical expressions than cluster (149) and (150) which draw on less prototypical conceptualizations (PERCH, LADDER, CLIFF).

Yet another observation that emerges from the corpus data is that the UP and DOWN spatial orientations interact with the containment schema, which also exerts some impact on the structure of metaphorical clusters. Here are some corpus illustrations of this point:

151. Togliatti complex on the Volga river that produces Ladas and Zhigulis, sank deeper into debt.
152. In South America, meanwhile, Ford is talking only of "improving" operating results. Here, it had hoped to break even in 1998, but had sunk into the red, to the tune of Dollars 75m (…)
153. (…) as the country began to climb out of a decade of economic collapse since the break-up of the Soviet Union.
154. (…) manufacturing was close to climbing out of its trough.

As can be inferred from these examples, financial or economic underperformance is conceptualized as *being inside of a container* (examples 151, 152). Consequently, the source notion of *going* or *being outside* of a container provides us with a conceptual tool for understanding the target notion of overcoming financial (or other) difficulties by particular companies, sectors, economies etc. (examples 153, 154).[38] The lexical correlates of this pattern range from highly conventional items (examples 151-153) to more idiosyncratic expressions (154). This again has to do with the degree of prototypicality of conceptual representations (e.g. 'climb

[37] There seems to be a correspondence between the level of prototypicality and the degree of specificity of the images evoked by a given lexical items. That is, the less specific a word is the more prototypical areas of a given schema it appears to occupy. For example, 'fall' and 'low' are rather general representatives of DOWN schema and at the same time represent more prototypical instantiations of this schema than, say, 'flagship' or 'sink'.

[38] It should be also noted that the notions conceived of as less prototypical tend to be more specific and clearly delineated in our conceptual systems than those considered as more central, which tend to be more general and thus vaguer.

out of economic collapse vs. climb out of trough'; TROUGH is a much more peripheral instantiation of DOWN schema than COLLAPSE).

- Inconsistent clusters – these are the clusters which draw on experientially unrelated structures. Consider the examples below:

155. Electrical goods retailer Dixons was the best performer in the FTSE 100 with the shares hitting a new high as the market appreciated Wednesday's news of the success of the group's internet service.
156. Foods group Danone was the day's hot stock, going limit-up at one stage and closing with a gain of 8.9 per cent or 18.60 at 228.50 following strong results, which helped lift the clouds that descended on the sector last week.
157. Once the yen started to rebound, such speculative operators had to unwind their positions rapidly, further fuelling the Japanese currency's rise.
158. The dollar flirted with collapse again yesterday, dipping below Y110 against the yen amid heavy selling and attempts to cash in on options around that level.

The collocations highlighted in these examples derive from clusters of cognitively distant domains of experience. For example in (155), violent behavior (HIT) and UP orientation (HIGH) come together despite their apparent lack of contiguity at the experiential level. Thus, if approached literally, inconsistent clusters are semantically opaque, that is they do not evoke any coherent conceptualizations. To illustrate, we can *fuel* a vehicle but not a *rise* (example 157), we can *lift* objects but not *clouds* (156), we *flirt* with other people but not with *collapse* (158). It should be clear that consistent clusters are more transparent on literal reading.

Similarly to consistent cluster, the inconsistent metaphorical clusters differ in the degree of their conventionality: they might be highly conventional linguistic expressions (e.g. HIT A HIGH), or even idiomatic items (LIFT CLOUDS), but they might also be one-shot metaphors (FLIRT WITH COLLAPSE). The points made in this section can be summarized as follows:

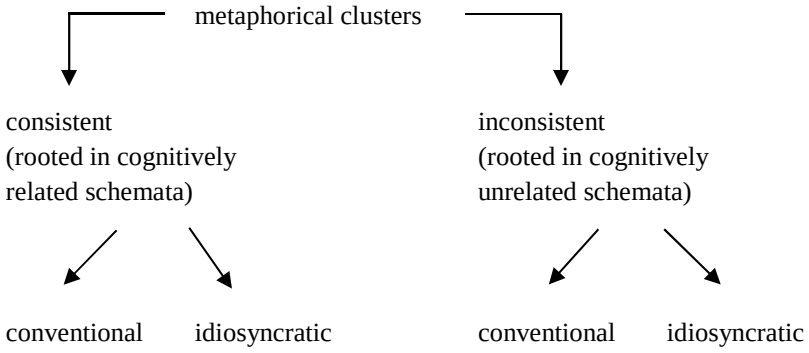


Fig. 6.14 Metaphorical clusters

In sum, depending on the nature of the underlying image schematic representations, we get either consistent or inconsistent metaphorical clusters, which are represented in language by items characterized by different degrees of conceptual entrenchment. As has been seen, these clusters range from fully conventionalized means of linguistic expression (e.g. CLIMB HIGH-

ER, HIT A HIGH) to fully idiosyncratic or ‘one-shot’ metaphorical expressions (e.g. FALL OFF A PERCH, FLIRT WITH COLLAPSE). The space between these two poles tends to be filled by more or less conventional and more or less idiosyncratic metaphorical clusters.

The best measure of the degree of conceptual entrenchment of particular key lemmas and metaphorical clusters they form (both consistent and inconsistent) appear to be frequency data provided by corpus texts. They will be dealt with in chapter (8).

7. Metaphors In Polish-Language Business Journalism

7.1. Introduction

The present chapter is concerned with metaphors in the Polish-language data. It is structured in the same way as Chapter 6 in that lexical metaphors are treated as 'points of access' to the underlying conceptual mappings and the main focus is on the metaphorical structure of the domain of *successful* and *poor business performance*. The lexical material is organized according to the source domains evoked by particular sets of expressions identified in the corpus of texts drawn from Polish-language business press (cf. methodological chapter). Also, the corpus uses of the key lemmas have been confronted with their dictionary status and the morphological processes associated with particular sense extensions have been given some attention. The chapter ends with a discussion of more extended stretches of metaphorical language, i.e. metaphorical clusters.

7.2. UP image-schema

Polish-language data abound in metaphorically extended senses rooted in UP image-schema. A number of different aspects associated with this broad experiential domain is subjected to metaphorization via the quantitative mapping MORE IS UP. At least three different image-schematic structures appear to be involved in the metaphorical mappings in question. Here they are together with their lexical correlates:

a. *Upward motion*, which incorporates both causative as well as reflexive scenario (cf. fig. 6.2 and 6.3 respectively). The former is evoked by items such as WZRASTAĆ (grow/rise), ROSNĄĆ (grow), PODNIEŚĆ SIĘ (rise), PIĄĆ SIĘ (climb), WSPIĄĆ SIĘ (climb up), SKOCZYĆ (jump), ODBIJAĆ SIĘ (rebound), WYBIJAĆ SIĘ (bounce), WYSKOK (jump), WSCHODZIĆ (rise), IŚĆ/PIĄĆ SIĘ/RUSZYĆ/POGNAĆ PRZESKAKIWAĆ/ PORUSZAĆ SIĘ W GÓRĘ (go, climb, move, rush upwards). The latter pattern, which typically involves spatial manipulation of objects (elevating something to a higher position) is characterized by a lower productivity and is instantiated by the following items: PODNIEŚĆ (raise), PODWYŻSZAĆ (put up), PODCIĄGNĄĆ W GÓRĘ (pull up), WYWINDOWAĆ (hoist), WINDOWAĆ (hoist), LEWAROWAĆ (leverage), DŹWIGNIA (lever), PODBIJAĆ (push up), CIĄGNĄĆ W GÓRĘ (pull up).
b. *Upper parts or surfaces* – SZCZYT (peak), WIERZCHOŁEK (tip/top), PUŁAP (ceiling) (cf. TOP subschema fig. 6.4).
c. *vertical measurements*– (adj.) WYSOKI (high). (cf. VERTICALITY schema fig. 6.5).

CORPUS EXAMPLES:

1. Ropczyce rosną jak na drożdżach
2. (...) kurs akcji wzrósł o 12,9%, odbijając się od 35,6 zł. Analitycy uważają, że Echo ma dalszy potencjał wzrostowy.

3. Wyższe euro oznacza wzrost cen, co może przełożyć się na wielkość sprzedaży.
4. (...) indeksy nie zdołały się dotąd podnieść.
5. Stworzenie jednego tak dużego podmiotu w zamysłach resortu gospodarki ma podnieść wiarygodność kredytową stoczni.
6. Wzrost cen miedzi i zysków pozwoli na podwyżki pensji.
7. Jeśli rzeczywistym celem nabywców akcji z zeszłego tygodnia było podciągnięcie notowań, wywołanie euforii i sprzedaż akcji po wyższych cenach nie wykluczałbym jeszcze jednej próby ataku.
8. Fiasko próby pokonania oporu spowodowało wyraźny spadek optymizmu wśród inwestorów wierzących w kontynuację dotychczasowych zwyżek.
9. Wejście inwestora z Ukrainy winduje notowania spółki.
10. Po niewielkiej zwyżce na otwarciu indeks największych spółek wspiął się do 1258 pkt, czyli w okolice szczytów poprzedniej fali wzrostowej z przełomu roku
11. (...) MACD po obronie wsparcia w postaci poziomu równowagi i przełamaniu spadkowej linii trendu rośnie w kierunku ostatniego lokalnego wierzchołka.
12. (...) osiągnięto pułap możliwości produkcyjnych.
13. (...) potrzebna będzie hossa by kurs BRE banku skoczył z obecnych 76,70 do 138,80 zł. Samymi wynikami nie da się na tyle podbić ceny.
14. Używają derywatów do lewarowania zysków i zabezpieczania przed ryzykiem rynkowym i stopy procentowej.
15. Po dynamicznym wybiciu z początku miesiąca kurs rozpoczął konsolidację.
16. Początek sesji dawał jeszcze nadzieje. Szybki wyskok z poziomu otwarcia na 1159 nad 1170 pkt ,mógł się bykom spodobać.
17. Mimo przesądzonego praktycznie wejścia do UE, Polska nadal jest traktowana jako rynek wschodzący
18. Nieznaczny zysk na pojedynczej transakcji był zwielokrotniany dzięki stosowaniu ogromnej dźwigni finansowej.
19. Umocnił się BRE Bank (+1,3%). Jego kurs od lutego powoli, ale systematycznie pnie się w górę.
20. Miałem nadzieję, że fundusze pognają rynek do góry i zakończą hossę tymi właśnie wynikami, wiedząc, że to ostatnie w tym roku tak dobre raporty.
21. Jednak perspektywa starcia z silną barierą wyraźnie odbiera siły popytowi, który ciągnął rynek w górę niemal nieprzerwanie od marca.
22. Znając obecna tendencje rynku do poruszania się w górę skokami, wartość ta może być osiągnięta w jedną-dwie sesje.

As can be seen, UP schema is a rich source of metaphorically extended senses, with verbs denoting an increase in size and development (of living organisms) as well as verbs of upward motion having the largest representation. Lexicographical sources tend to overlook the metaphorical connection between the source and target senses of these lemmas, treating them as distinct meanings (cf. USJP). An exception to this can be observed in the case of the highly productive lemma WZRASTAĆ (example 1, 2). Its different senses have been marked as shades of the same meaning by USJP, which suggests that they are conceived of as interrelated (cf. methodology chapter). Also, it is noteworthy that WZRASTAĆ entry lists the quantitative sense at the very top (as sense a), which may testify to its cognitive primacy over all the other meanings, including the 'embodied' ones. It should be also noted that the nominal entry, that is WZROST has become a part of a highly conventionalized phrase 'wzrost gospodarczy' (economic growth), which has achieved terminological status in economic discourse.

What is noteworthy is that the Polish corpus contains a few lemmas referring to mechanical devices for lifting people or objects. One of them is WINDOWAĆ and its perfective counterpart WYWINDOWAĆ (example 9). It should be clear that WINDOWAĆ/WYWINDOWAĆ derive from the nominal form 'winda' (a lift/escalator). The point, however, is that the semantics of the nominal form is only selectively reflected in the semantics of the two verbal forms in question. That is to say, the basic (source) sense of WYWINDOWAĆ is specified in USJP as to *lift somebody/something*, with the emphasis being put on the difficulty with which this action is performed and no mention being made of the device enabling the upward motion (that is *winda*). The entry for WINDOWAĆ, on the other hand, makes a mention of *winda* (move something upwards by means of a lift), however with the reservation that it is a rather rare use. Thus, what can be seen here is a certain degree of semantic bleaching taking place in the course of the derivational process, that is the aspect of upward motion has been transferred, while the device enabling this motion (winda) has been bleached out and does not figure in the semantics of the verbal forms. It is thus the general concept of upward motion that is subjected to metaphorical mapping onto the target domain of *increase in quantity or value*, as recorded by lexicographical sources.

The other lemmas having technical or mechanical connotations are LEWAROWAĆ and DŹWIGNIA. The target meanings of these two items have a well-established position in the domain of finance. LEWAROWAĆ refers to an investment strategy of using borrowed money, specifically, the use of various financial instruments or borrowed capital to increase the potential return of an investment. DŹWIGNIA, on the other hand, denotes the ratio of a company's loan capital (debt) to the value of its ordinary shares, equity (it measures a company's financial leverage). When the proportion of debt to equity is great, then a business may be thought of as being highly geared, or highly leveraged. These target meanings apparently have their roots in the source notion of lifting heavy loads with a lever. It should be noted here that the physical action described as 'lewarować' necessarily involves the use of 'lewar' (lever), which makes the meaning of this lemma more restricted and more specific than that of 'windować' (which does not mention the use 'winda', as pointed out above). This more specific construal appears to be carried over to the target domain where LEWAROWAĆ has a more restricted and more specialized use than WINDOWAĆ (which denotes a general concept of an increase in value of e.g., prices or shares).

Furthermore, the lemma ZWYŻKA (example 10) seems to represent what we have referred to as a figurative *morphological extension* – while its morphological connections with UP schemata cannot be overlooked (cf. zwyżka vs. e.g. wyższy, wyżej etc.), all its semantic functions are restricted to the abstract domain of quantity. Like DŹWIGNIA and LEWAROWAĆ it has acquired the status of a terminological item in economic discourse denoting an increase or rise in the value, price, or cost of something. The nominal form PODWYŻKA (example 6) also represents an instance of a part-of-speech extension in that it refers exclusively to the target domain of an increase in quantity or value, while its other inflectional variants (PODWYŻSZYĆ, PODWYŻSZAĆ, PODWYŻSZENIE) have both the source and target domain applications. It should be noted here that ZWYŻKA appears to have a more restricted use than PODWYŻKA in that it tends to be used mainly in the context of stock markets and share prices.

Apart from the general aspects of upward orientation which get mapped onto the target domain of business performance via MORE IS UP metaphor, more specific notions such as the pace of upward motion and height are also subject to metaphorization. When we look at the different verbs of motion, as listed above, it becomes apparent that some of them imply gradual and/or slow movement e.g. WSPINAĆ SIĘ, WZRASTAĆ, CIĄGNAĆ W GÓRĘ, PIĄĆ SIĘ W GÓRĘ (examples 2, 10, 19, 21), which corresponds to *gradual* increase in quantity/value etc. Yet, there are also items which bring into focus more energetic and quick motion – SKOCZYĆ, WYBIJAĆ SIĘ, WYSKOK, POGNAĆ W GÓRĘ, which, when mapped onto the target domain, denote an increase by *large amount* (examples 13, 15, 16, 20).[39] These meanings of course are due to the MORE IS UP metaphor and its entailments MORE IS FAST and LESS IS SLOW.

Furthermore, the notion of maximum height evoked by items such as SZCZYT, WIERZCHOŁEK, PUŁAP is reflected in the recipient domain as the notion of *maximum* quantity/value, etc. (examples 10-12). It is noteworthy that the USJP entry for PUŁAP lists the quantitative sense in the first position before the spatial sense, which describes a wooden ceiling. The source notion of the upper interior surface of a room is listed only in the fourth position and is labeled as archaic. This appears to shed some light on the diachronic process of semantic change via metaphor – the literal sense (ceiling) has been gradually fading into oblivion and is being replaced by the metaphorically extended meaning (upper limit). Furthermore, the notion of SZCZYT is a much more conventional way of referring to maximum quantity than WIERZCHOŁEK, which is used on a more idiosyncratic basis (that is as a more creative substitute for SZCZYT). Other meanings characterized by a lower degree of entrenchment and thus not found in dictionaries include the verbal forms PIĄĆ SIĘ, WSPIĄĆ SIĘ, ODBIJAĆ SIĘ, WYBIJAĆ SIĘ, WYSKOK, all of which function as more vivid ways of rendering the target notion of an increase in value. As noted earlier, these less entrenched uses usually convey some additional shades of meaning such as an increase by large/ small amount (which corresponds to the pace of motion). Also, the items ODBIJAĆ SIĘ, WYBIJAĆ SIĘ, WYSKOK, evoke the image of something or someone moving quickly back from a surface (usually a bottom part) after hitting it, which gives rise to the target concept of a rapid increase after a period of slump.

The corpus has also yielded a range of phrasal items which consist of a verb of motion followed by the direction specifying adverbials W GÓRĘ/ DO GÓRY: IŚĆ/ CIĄGNĄĆ/ PODCIĄGNĄĆ/ PIĄĆ SIĘ/ RUSZYĆ/ PRZESKAKIWAĆ/ POGNAĆ/ PORUSZAĆ SIĘ W GÓRĘ/ DO GÓRY. Some of these items imply slow motion, while others bring into focus quick and energetic movement (cf. piąć się vs. pognać) and as such activate the pace metaphors MORE IS QUICK and LESS IS SLOW. It should be noted that dictionaries recognizes the target uses of only two of these phrasal items, that IŚĆ and PIĄĆ SIĘ W GÓRĘ, which can be found in the entry for *iść*. Another phrasal item traced in the corpus is the fixed expression WSCHODZĄCY RYNEK which has terminological status within the field of economics. The activation of UP image schema is triggered here by the source lemma WSCHODZIĆ as it applies to heavenly bodies rising up on the horizon. When mapped onto the target domain of economic activity, it corresponds to the English 'emergent markets' denoting markets coming into greater

[39] It should be noted that the lemmas WYBIJAĆ SIĘ and WYSKOK derive from sports register (cf. examples 16, 17).

economic prominence. Thus, the underlying metaphor activated here is the axiological correlation GOOD IS UP, and its more specific entailment MORE IMPORTANT IS UP.

Finally, it should be observed that the patterns of axiological transfer activated by the key lemmas under investigation proceed analogously to the ones observed in the English-language data. Thus, on the whole, the positive valuation associated with the UP schemata is preserved under metaphorical mappings. However, departures from this pattern can be observed when 'minus' or some neutral landmarks are involved in the mappings (cf. reverse axiological transfer). These departures are illustrated in (23) and (24):

23. Prognozowany na 2003 r. *deficyt budżetowy* TR/(-) w USA wzrastał skokowo z około 1% PKB, aby osiągnąć obecny pułap 4,6. [-]
24. Zapowiadany wzrost *cen reklamy* TR/(n) będzie oznaczał koniec marzeń o podboju telewizji dla blisko setki reklamodawców. [-]

7.3. DOWN image-schema

LESS IS DOWN metaphor, which is a very productive source of sense extensions in the domain of business activity, is grounded in the following structures of experience:

a. *Downward motion*, which embraces both CAUSATIVE (cf. fig. 6.7) and REFLEXIVE subschema (cf. fig. 6.8). The former is instantiated by key lemmas such as OBNIŻYĆ (lower), SPROWADZIĆ (bring down), CIĄGNĄĆ W DÓŁ (pull down). The latter, on the other hand, is evoked by SPADAĆ (fall), UPADAĆ (collapse), ZSUWAĆ SIĘ (slide down-imperf), OBSUNĄĆ SIĘ (slide down_perf) NURKOWAĆ (dive), ZEJŚĆ (go down), ZAPAŚĆ SIĘ (collapse), ZAŁAMAĆ SIĘ (break down) as well as a range of phrasal items such as ciągnąć/ pociągnąć/ lecieć/ wybić się/ przeskakiwać W DÓŁ/ NA DÓŁ (pull/ fly/ bounce/ jump down).
b. *Concave surfaces* subschema is represented by DOŁEK (hole), GŁĘBOKI (deep) and DNO (bottom). It should be noted that each of these lemmas profiles different aspect of the schema. DOŁEK brings into focus *sunken places*, rather small in terms of their depth. The lemma GŁĘBOKI, on the contrary, profiles large distance from top to bottom. Finally, DNO highlights the lowest (bottom) parts of concave surfaces or containers.
c. *Verticality schema* profiles small distances from the bottom to the top. At the lexical level it is represented by the highly productive lemma NISKI (low_adj), (cf. fig. 6.10).

CORPUS EXAMPLES:

27. Kurs warszawskiego holdingu spadał po informacjach o zarzutach obligatariuszy, że spółka łamie umowę dotyczącą spłaty 2 mld zł. Obligatariusze grożą złożeniem wniosku o upadłość.
28. Z kolei notowania Centrozapu załamały się kolejny raz po informacjach o opóźnieniu w przekazaniu raportu rocznego i niewielkich szansach wierzycieli spółki na odzyskanie swoich należności. Po ogłoszeniu upadłości Piaseckiego kurs akcji tej spółki nurkuje do dna.
29. Budownictwo jest tym sektorem, który szczególnie mocno odczuwa spadek koniunktury w całej gospodarce.

30. Analitycy Deutsche Banku obniżyli do „trzymaj" rekomendacje dla KGHM i „sprzedaj dla Orbisu.
31. Aby utrzymać rezultaty spółki na dotychczasowym poziomie, co nie było łatwe ze względu na spadający popyt konsumpcyjny w USA, zahamował on ekspansję spółki i położył nacisk na obniżkę kosztów działalności.
32. (...) wobec braku dobrych wiadomości postanawiają skracać pozycje przyczyniając się do utrwalenia spadkowej tendencji.
33. Największy problem spółek IT to niska rentowność.
34. Spółka wygrzebała się z głębokiego dołka, w którym tkwiła rok wcześniej.
35. (...) kierownictwo firmy nie wyklucza pogorszenie wyników finansowych ze względu na coraz gorsze warunki rynkowe -m.in. zapaść i zmiany własnościowe w polskim hutnictwie (...).
36. Zniżka na otwarciu była niewielka i po krótkim czasie rynek ruszył do góry.
37. Spadek nie był głęboki i nie naruszył struktury tendencji korzystnej dla posiadaczy akcji.
38. Warszawski indeks WIG20 balansował wczoraj tuz powyżej psychologicznie ważnej linii 1500pkt. Rano wręcz się o nią otarł, by potem szybko uciec do poziomu 1533 pkt. Potem systematycznie zsuwał się i dzień zakończył z wartością 1511,8 pkt.
39. Kurs ZPUE w ostatnich miesiącach dynamicznie rósł, osiągając kolejne maksima (wczoraj obsunął się o 3%, do 29 zł).
40. Teoria mówi, ze sprowadzi to S&P 500 przynajmniej do poziomu 800 pkt. Wszystko wskazuje na to, ze powinniśmy mieć do czynienia z cyklicznym spadkiem indeksów.
41. W połowie sesji uaktywniła się strona podażowa i indeks ponownie zszedł na minusy.
42. Polskie indeksy ciągną w dół akcje spółek informatycznych.
43. Tymczasem indeksy GPW i obroty idą w dół. (...) Polska giełda ruszyła w dół w ślad za europejskimi.
44. Sektor zaawansowanych technologii pociągnęli w dół producenci półprzewodników i infrastruktury sieciowej.
45. Wskutek wahań cen energii i jej nośników wielkie koncerny naftowe potrafią przeskakiwaćco roku po kilkanaście miejsc zarówno w górę jak iw dół.
46. ..środowa spadkowa sesja wygląda na typowe „strząśnięcie" i takie zachowanie rynku, tj. paniczna wyprzedaż jest charakterystyczne dla końcowej fazy spadków.
47. Właśnie tego dnia notowania „ściągnięte" zostały z 1185 pkt., do 1170 pkt na zamknięcie.

The corpus has yielded a number of lemmas whose target sense of *decrease in quantity/ value* has not been recognized by dictionary compiler. These are NURKOWAĆ, ZSUWAĆ SIĘ, SPROWADZIĆ, ZEJŚĆ, STRZĄSNĄĆ, ŚCIĄGNĄĆ as well as a number of phrasal verbs ciągnąć/ pociągnąć/ lecieć/ ruch/ wybić się W DÓŁ/ NA DÓŁ (ex: 38, 28, 40, 41, 46, 47).[40] These less conventional linguistic items tend to occur in stock exchange commentaries and typically refer to falling share values.

As regards the target senses that do feature in reference works, they typically have the status of distinct meanings, the only exception being the lemma DOŁEK (example 34) whose source and target senses have been treated in USJP as 'shades' of the same meaning. It should be added that only a couple of phrasal items including IŚĆ and SPADAĆ W DÓŁ have been recognized as having quantitative meanings (the relevant definition has been found under the headword *iść*)

[40] The lexemes strząśnięcie and ściągnąć have been put into inverted commas, which points to the authors' awareness of the idiosyncratic nature of its target use (see examples 46, 47).

Furthermore, two instances of morphological sense extension have been yielded by the corpus, that is the key lemmas ZAPAŚĆ and ZNIŻKOWAĆ/ZNIŻKA (examples 35, 36). The latter appears in USJP with the annotation suggesting its terminological status within the field of economics and banking. Its experiential roots can be presumably traced back to the morphologically related items 'zniżać/ zniżyć' (to lower something). However, ZNIŻKOWAĆ and ZNIŻKA do not convey any spatial meanings, its semantic scope being entirely restricted to the domain of quantity and value. The lemma ZAPAŚĆ, on the other hand, derives from the verbal forms 'zapadać/ zapaść się' (to sink, collapse) which activate destruction imagery where a structure collapses or is destroyed by some uncontrollable force. This image is mapped onto the target concept of unfavorable or disadvantageous situation in which business or commercial institutions are, profiling their financial underperformance. Other items which appear to be motivated primarily by the general axiological metaphor BAD IS DOWN include UPADAĆ, UPADŁOŚĆ, UPADŁY, DOŁEK, ZAŁAMAĆ SIĘ, DNO and ZAPAŚĆ. However, it should be pointed out that the target notion of negative evaluation tends to combine with that of decrease in value or quantity, giving rise to a single blended conceptualization, where a poor business performance overlaps that of a decrease in the amount or intensity of business activity.

SPADKOWY, OBNIŻKA, UPADŁOŚĆ and UPADŁY represent part-of-speech extensions by our definition. That is, although they have inflectional counterparts in the source domain of downward motion (c.f. spadać, obniżać, upadać), these nominal and adjectival forms function only in the target domain of quantity or value. More specifically, UPADŁOŚĆ and UPADŁY function as specialized terms within the field of economics and law denoting, respectively, the state of insolvency and businesses/companies unable to meet their liabilities (example 28).[41] It is also worth noting here that the entry for SPADEK features *sense reversal* in that the extended (quantitative) meaning comes before its literal counterpart (the action of falling down), which entails the conceptual primacy of the former over the latter.

The general pattern of axiological transfer is that DOWN orientation tends to be an indication of negative business/ economic trends. However, this is not an absolute valuation, that is DOWN can also be the source of positively charged concepts in an appropriate context, as illustrated in (50) and (51):

50. Spadło nieznacznie *bezrobocie*TR/(-), ale to może być czynnik sezonowy. [+]
51. Sektor budowy domów nadal kwitnie, bo *stopy procentowe* TR/(n) są niskie i będą obniżane.[-]

[41] It should be noted that all the lemmas labeled as part-of-speech extensions have the status of separate entries in reference works.

7.4. Motion scenario

This section is concerned with various motion related concepts, which together form a coherent experiential scenario. The scenario consists of a few more specific experiential structures, which are listed together with the relevant key lemmas:

a. *Lack of motion* (-)
ZASTÓJ (slump)
ZATRZYMAĆ SIĘ (to stop)
DREPTAĆ W MIEJSCU (to walk in one place, tread water)

b. *Setting into motion* (+)
RUSZYĆ SIĘ (to make a move)
ROZRUSZAĆ (to set into motion)
POCIĄGNĄĆ (to pull)
NAPĘDZAĆ (to propel)
SIŁA NAPĘDOWA (driving force)
MOTOR NAPĘDOWY (driving motor)

c. *Fast forward motion* (+)
KROK NAPRZÓD (a step ahead)
ROZPĘDZAĆ SIĘ (accelerate)
PRZYŚPIESZAĆ (speed up)
RUSZYĆ PEŁNĄ PARĄ (to go full steam ahead)
BŁYSKAWICZNE TEMPO (rapid pace)
GONIĆ (to chase)
WYŚCIG (race)
POŚCIG (pursuit)
RAJD (rally)
ZDYSTANSOWAĆ (to outrun)
WYPRZEDZIĆ (to overtake)

d. *Slow forward motion* (-)
HAMOWAĆ (to brake)
SPOWOLNIĆ (to slow down)
WYTRACAĆ TEMPO (to lose pace)
NIE NADĄŻAĆ (not to keep up pace)
ZOSTAĆ/ POZOSTAĆ W TYLE (to lag behind)
ZADYSZKA (panting)

e. *Backward motion* (-)
W ODWROCIE (in retreat)

CORPUS EXAMPLES:

52. W końcu coś ruszyło się w sektorze budowlanym (...)
53. Gospodarka wciąż nie może wyraźnie ruszyć z miejsca (...)
54. OPZZ apelował o zmniejszenie obciążeń w podatkach osobistych, co mogłoby rozruszać gospodarkę...
55. Zrobiliśmy ogromny krok naprzód: zapoczątkowano proces restrukturyzacji, zmniejszono koszty i zwiększono sprzedaż.
56. Ekonomiści zwracają jednak uwagę, że dobre wyniki przemysłu nie wystarczą, aby pociągnąć całą gospodarkę.
57. Eksport pozostaje siłą napędową gospodarki.
58. Jak wynika z raportu, OFE w coraz większym stopniu stają się motorem napędowym GPW.
59. W opinii ekonomistów, kiepskie wyniki budownictwa wskazują ze nie nastąpiło jeszcze długo oczekiwane ożywienie w inwestycjach, bez którego gospodarka nie ruszy „pełną parą".
60. Tymczasem w Polsce gospodarka powoli rozpędza się i będzie przyśpieszać w wyniku skumulowanych efektów cięć stóp procentowych.
61. Na rynku obligacji skarbowych obroty od stycznia rosły w błyskawicznym tempie
62. Skracanie dystansu gospodarczego. Unię dogonimy za prawie 60 lat. Polską gospodarkę czeka długi pościg. Marna to pociecha, że Bułgarzy, a głównie Rumuni mają jeszcze dalej.
Doganianie nie będzie odbywać się jednakowo. Największe wyzwanie stoi przed węgierskimi małymi i średnimi przedsiębiorstwami. Nie są one przystosowane do warunków panujących na unijnym rynku. Martwię się, jak sobie poradzą w tym wyścigu.
63. Europa dwóch prędkości.
Możemy narzucać tempo pozostałym.
Dogonienie gospodarek krajów tworzących pierwszą „piętnastkę" krajów Unii Europejskiej ma zająć Polsce 60 lat. I to nie krajów najzamożniejszych, ale ciągnących się w ogonie tego peletonu. Paraliżująca perspektywa?
64. General Motors znalazł się na drugim miejscu, wyprzedzając Exxon Mobil. Enron znalazł się na ubiegłorocznej liście mimo ogłoszenia upadłości w grudniu 2001 r.
65. Przedakcesyjny rajd zagościł natomiast na Węgrzech, gdzie stale wynosi indeks BUX coraz wyżej.
66. Po lekkiej zadyszce na przełomie marca i kwietnia Nasdaq Composite wraca do trendu wzrostowego.
67. Kurs Netii wyhamował.
68. W raportach widać już było, że gospodarka hamuje, ale informacje te tym razem pomagały obozowi byków.
69. Kiepskie wyniki przewoźnika, to efekt zmniejszenia (...) liczby pasażerów, wojny w Iraku i spowolnienia gospodarczego.
70. Po ponad dwóch latach zastoju w 2004 r. przychody towarzystw powinny zacząć wyraźnie rosnąć.
71. Pomimo sporej desperacji kupujących nie udało się zakończyć wczorajszej sesji w Warszawie na plusie. WIG20 stracił 0,4% i zatrzymał się na 1150, 6 pkt.
72. Nie można jednak wykluczyć, że od 2 miesięcy obserwujemy kolejny przystanek w głównym trendzie i po okresie dreptania w miejscu kurs znów nieznacznie pójdzie w górę.
73. Tymczasem za rynkami zagranicznymi nie nadążają przede wszystkim największe spółki.
74. Akcje banków zostały w tyle za czołówką GPW.
75. Natomiast ze względu na gorsze perspektywy w odwrocie znalazły się notowania holenderskiej firmy wydawniczej Wolters Kluwer.

MOTION schema must be seen in the context of experientially related substructures such as LACK OF MOTION and SETTING INTO MOTION, both of which constitute natural and indispensable point of reference in our understanding of the concept of motion (cf. section 6.4). Under the heading of LACK OF MOTION we find the lemma ZASTÓJ, which seems to repre-

sent a classic example of a morphological extension deriving from *stać* or *stanąć* (to stand still/ to come to a halt). When subjected to semantic extension, the corresponding target notion is that of *a lack of business activity*, or in other words *economic slump* (example 70). ZATRZYMAĆ SIĘ and DREPTAĆ W MIEJSCU, on the other hand, appear to have primarily quantitative meanings denoting *lack of change in the values of stock exchange indices* (example 71, 72). Reference works tend to recognize the target uses of these two items (cf. USJP). However, they provide a more general definition, which focuses on the lack of progress or development, and testifies to the activation of LACK OF DEVELOPMENT IS LACK OF MOTION axiological mapping (which is a more specific instantiation of the more general BAD IS LACK OF MOTION metaphor).

SETTING INTO MOTION part of the scenario is quite diversified with respect to the imagery evoked by the constituent key lemmas. Yet, what all these items have in common is the underlying notion of a transition from a stationary condition to motion. This, in turn, is mapped onto the target sense of *improvement in business/ economic performance* (examples 52-58), as motivated by GOOD IS MOTION or its more specific instantiation DEVELOPMENT IS MOTION metaphorical concept.[42]As pointed out in the preceding chapter, these mappings have strong experiential basis in that motion is correlated with energy, vitality, activity as opposed to a lack of motion which is associated with lack of energy or vigor. It should be noted here that USJP includes the *betterment* or *improvement* sense only in the entry for RUSZYĆ SIĘ. POCIĄGNĄĆ and NAPĘDZAĆ do not mention the improvement meaning at all. ROZRUSZAĆ, on the other hand, makes a reference to making someone more energetic or lively, which appears to be extended onto the domain of business performance via personification. However, the most prototypical meaning of ROZRUSZAĆ is that of the movements of limbs performed in any direction possible in order to restore them to efficient functioning. This, in turn, when highlighted under metaphorical mapping, leads us to the target notion of *restoring the economy to proper functioning* (example 54).

The domain of MOTION has turned out to be most productive in terms of the constituent lexical items and as such has been subjected to more fine-grained categorization which takes into account the pace and direction of motion. One distinction is between FORWARD and BACKWARD MOTION schemas. The latter schema has a rather marginal linguistic representation; only one relevant lemma – W ODWROCIE (in retreat) has been traced in the corpus data. This item represents a blend of the quantitative (decrease in value) and axiological meanings (poor business performance), which is motivated by the well-entrenched metaphors LESS IS BACKWARD and BAD IS BACKWARD (example 75).

The highly productive domain of FORWARD motion has been further subdivided according to the speed of motion. These more specific subdomains are projected onto the target domain via metaphors: INCREASE IN BUSINESS ACTIVITY IS INCREASE IN SPEED and DECREASE IN BUSNIESS ACTIVITY IS DECREASE IN SPEED. The former mapping is evoked by PRZYŚPESZAĆ and ROZPĘDZAĆ SIĘ (examples 60), and the latter by SPOWOLNIENIE (example 69), which has a special status in economic discourse denoting a period of slump and poor

[42] The lemmas listed under the column of SETTING INTO MOTION do not seem to make any explicit references to the direction aspect. Thus, given the low salience of the direction aspect, the underlying metaphor has been specified as GOOD IS MOTION.

business performance. By the same token, the lemma HAMOWAĆ is used to refer to the general notion of *reduction in business activity* (example 68), or to *reduction in value* (example 67). It should be noted that the dictionaries consulted do not include any references to the decrease or poor performance in their entries for HAMOWAĆ, focusing on the rather vague notion of *preventing something from happening.* A notable exception to this is the USJP entry for PRZYHAMOWAĆ, which mentions the target notion of reduction.

The subdomains of QUICK and SLOW motion also have some interesting lexical representation. For example, the key lemma ZADYSZKA calls to mind the physical condition of being short of breath (e.g. after running fast), which in turn, suggests slower pace of motion and gives us a conceptual handle on the target notion of weakening stock prices (example 66). The ontological correlation highlighted here is thus the one between the *loss of physical vigor* (and presumably the slower pace of motion) and that of *reduction* in value. All the *pace* related items have clear axiological connotations: QUICK MOTION subdomain tends to be extended onto the target concept of successful performance via the simultaneous activation of MORE IS QUICK and GOOD IS QUICK. This pattern is represented at the lexical level by items such as RUSZYĆ PEŁNĄ PARĄ and BŁYSKAWICZNE TEMPO which convey the overlapping concepts of an increase by large amount and successful performance (examples 58, 61). SLOW PACE subdomain, on the other hand, gives rise to the target notion of poor performance and decrease in business activity via the overlapping LESS IS SLOW and BAD IS SLOW metaphors. Apart from ZADYSZKA, this pattern is represented by phrasal items NIE NADĄŻAĆ and ZOSTAĆ/ POZOSTAĆ W TYLE (lag behind) as exemplified in (73), (74).

The domain of *fast forward motion* includes a range of items associated with the concept of race, which can be further subdivided into *contest of speed* (WYŚCIG, RAJD), *chase or pursuit* (GONIĆ, DOGONIĆ), and *overtaking* or *leaving sb/sth behind* (WYPRZEDZIĆ, ZDYSTANSOWAĆ). As pointed out in the previous chapter (cf. 6.3) the experiential subdomain of RACE tends to be projected onto the target notion of *business competition*. This kind of vocabulary has turned out to be particularly prolific in the texts dealing with the topic of the enlargement of the European Union. As the extended examples (63) and (64) show, the underdeveloped economies of new member countries are conceived of as moving at a slower pace than the more efficient economies of the old EU members. This phenomenon, has been termed by one of the authors as *Europa dwóch prędkości* (the double-speed Europe). The subdomain of RACE must be also seen in the context of the underlying FRONT and BACK image schemas. The FRONT schema (WYPRZEDZAĆ, ZDYSTANSOWAĆ) translates into the language of the target domain as *doing better* than one's business rivals (examples 65, 66), whereas the key lemmas associated with the BACK orientation (NIE NADĄŻAĆ, ZOSTAĆ W TYLE) suggest a futile attempt to catch up with one's competitors.

Finally, it should be pointed out that the prototypical axiology of the schematic structures as discussed in this section has been preserved under metaphorization, which is to say that no instances of the *reverse* pattern have been traced in the corpus. Thus, the plus value of SETTING INTO MOTION, FORWARD and QUICK MOTION source domains have been transferred onto the target domain of successful business performance. Conversely, the negative load of LACK OF MOTION, BACKWARD and SLOW MOTION schemata has proved instrumental in the conceptualizations of negative business/economic phenomena.

7.5. Strength & weakness

The binary STRENGTH and WEAKNESS source domains subsume the following more specific conceptualizations:

a. *Having a lot of physical power*

SIŁA, SILNY, MOCNY

b. *Increase in physical power*

WZMOCNIĆ SIĘ

c. *Having little physical power*

SŁABOŚĆ, SŁABY

d. *Reduction in physical power*

OSŁABIĆ/OSŁABIAĆ, SŁABNĄĆ/OSŁABNĄĆ

CORPUS EXAMPLES:

76. Silny brand to narzędzie walki z konkurencją i sposób na przywiązanie klienta.
77. Później jednak na rynku pojawił się silnypopyt, który spowodował, że banki odrobiły większość strat.
78. Ekspansja ma za zadanie wzmocnienie pozycji firmy w przededniu poszerzenia UE.
79. Impexmetal rośnie w siłę.
80. Umocnił się BRE Bank (+1,3%).Jego kurs od lutego powoli, ale systematycznie pnie się w górę.
81. (...) na handlu akcjami najmocniejszejw maju spółki z WIG20 –Telekomunikacji Polskiej.
82. Po osiągnięciu umiarkowanie atrakcyjnych poziomów cenowych sektor bankowy zaczął zachowywać się mocniej.
83. Po południu kontrakty nie reagowały na wzrost wartości indeksu, a osłabieniena rynku kasowym doprowadziło do małej paniki wśród graczy terminowych.
84. (...) pogarszająca się sytuacja na rynku pracy i słabnące wskaźniki aktywności gospodarczej pokazuje, że znów zaczyna mieć ona problemy.
85. Skonsolidowane wyniki Prokomu i Softbanku można uznać za słabe.
86. Gdyby obecnie rząd sprywatyzował najlepsze kopalnie, to słabsze przedsiębiorstwa sektora węglowego musiałyby upaść.

SILNY and MOCNY get mapped onto the target domain of successful business performance via overlapping MORE IS STRONG and GOOD IS STRONG metaphors. Depending on which of these concepts becomes more salient under metaphorization we get either primarily quantitative or primarily axiological target meanings (cf. examples 77 and 76 respectively).

The positive axiology of the STRENGTH domain seems to be most perspicuous in the semantics of the verbal form WZMOCNIĆ, which translates into the language of the target domain as *to improve, e.g. the position of sb/sth* (example 78). However, it should be emphasized that the majority of the key lemmas in focus emphasize the quantitative and axiological component with equal force (cf. 79-82). One of the examples is the phrasal item ROSNĄĆ

W SIŁĘ (example 79) where the increase in a company's stocks is indicative of its becoming increasingly more prosperous.

The verbal form UMOCNIĆ SIĘ represents a morphological extension by our definition. That is, despite its morphological affinity with 'wzmocnić się', it functions solely in the target domain of quantity/ value or importance.

The lemma SŁABY (together with its various lexemic forms) is subject to metaphorical extensions via LESS IS WEAK and BAD IS WEAK conceptual metaphors. In most cases the emergent sense constitutes a cluster of *decrease* and *worsening* meanings as illustrated in examples (83) and (84). There are, however, instances where the axiological sense of *poor performance* seems to be cognitively more salient, as in (85) and (86) where SŁABY means simply *unsatisfactory* or *financially unsound/unsuccessful*.

Both the WEAKNESS and the STRENGTH domain are occasionally subject to reverse axiological transfer. The positive axiology associated with the source domain of STRENGTH might be reversed when the TR slot is occupied by negatively loaded items, which results in the minus actual value of the target senses. Furthermore, a few instances of positively loaded extensions of the WEAKNESS domain have been traced in the corpus. Consider (87) and (88):

87. *Silny* spadek (TR)/(-) na światowych giełdach. [-]
88. Polskie przedsiębiorstwa przeszły restrukturyzację. Dzięki temu znacznie wzrosła ich efektywność. Poza tym, sprzyja im *osłabienie* złotego TR/(n) do euro. [+]

In general, reference works recognize the semantic extensions of the lemmas under discussion, listing them as core meanings. However, the definitions only approximately match the corpus uses. For example, USJP mentions the notion of intensity in its entry for SILNY, with no mention being made of the value or quantity related notions. UMOCNIĆ, in turn, is defined in terms of 'high status in a hierarchy' and 'gaining a stable position', which also does not correspond directly to corpus occurrences. The entries for SŁABY/ SŁABNĄĆ provide more adequate explanations, which take into account both the quantitative and axiological aspect (cf. USJP entry which defines SŁABY and SŁABNĄĆ as 'not functioning properly' and 'to shrink', respectively).

7.6. Health & illness scenario

HEALTH & ILLNESS source domains provide a rich source of metaphorically extended senses in the area of business performance. These two general domains subsume a range of more specific conceptualizations, which are listed below together with their lexical correlates:

a. *Physical condition of the body*: FORMA / KONDYCJA (state of health),
b. *Physical well-being*: ZDROWY (healthy),
c. *Physical indisposition*: BOLĄCZKA, CIERPIEĆ/ UCIERPIEĆ (to suffer), KULEĆ (limp), PARALIŻOWAĆ (to paralyze), ODCHOROWAĆ (to recuperate), STAN PODGORĄCZKOWY (subfebrile temperature),
d. *Treatment:* RECEPTA (prescription), ZASTRZYK (injection), REANIMACJA (resuscitation), WIWISEKCJA (vivisection),

e. *Recovery*: UZDROWIĆ (heal), OŻYWIĆ (bring back to life), PRZEŻYĆ (to survive) UTRZYMAĆ SIĘ PRZY ŻYCIU (to stay alive),
f. *Death*: DOKONAĆ ŻYWOTA (die).

CORPUS EXAMPLES:

89. Spośród giełdowych spółek budowlanych w najlepszej kondycji znajdują się największe oraz te, które wspiera duży inwestor branżowy z zagranicy.
90. Firmy budowlane są w fatalnej formie
91. Na rynku jest niewiele zdrowych, ciekawych spółek, które poprawiają wyniki.
92. Największą bolączką spółki, którą w nikłym stopniu poprawiła ostatnia emisja 190 tys. akcji, jest płynność walorów.
93. Ubezpieczenia bardzo obecnie cierpią, ponieważ ING nie potrafi zrekompensować sobie wypłat na rzecz posiadaczy polis...
94. Spółki odkładają inwestycje, gdyż eksport ucierpiał w wyniku spowolnienia rozwoju gospodarczego na świecie.
95. Kopalnie nie powinny ucierpieć.
96. Kuleje spółka Rolimpex-Nasiona. W 2002 r. miała prawie 3 mln zł straty operacyjnej.
97. Obecny wzrostwartości emisji obligacji zamiennych nastąpił po okresie, w którym spadające kursy akcji i słabnąca gospodarka, niemal sparaliżowały ten segment rynku kapitałowego.
98. Byłoby to bardzo logiczne, bo wzrosty na małym wolumenie na tej wysokości indeksów powinny zostać odchorowane.
99. Rynek leków w stanie podgorączkowym.
100. W ocenie ekonomistów-oba programy nie są receptą na problemy polskiej gospodarki, zmierzają jedynie do pobudzenia popytu przez luzowanie polityki fiskalnej.
101. Zastrzyk kapitału ma pozwolić spółce na szybkie zwiększenie przychodów ze sprzedaży.
102. Vistula do reanimacji.
103. Spółce nigdy nie służą tego rodzaju spektakle, wiwisekcje i debaty.
104. Następnie wymienił uzdrowieniefinansów publicznych, pokonanie plagibezrobocia, podniesienie poziomu konsumpcji obywateli...
105. Trudno odpowiedzieć czy te firmy upadną. Będą skazane na konkurowanie ceną, na przeżycie na poziomie kosztów własnych albo na poziomie kosztów zmiennych a to jest droga donikąd – do wchłonięcia przez inny podmiot, albo zejścia z rynku.
106. (...) To znaczy lepiej niż prognozowali analitycy. Ich zdaniem w przemyśle widać już wyraźne ożywienie.
107. Po tym jak Sąd Najwyższy przywrócił nadzieję na utrzymanie firmy przy życiu, prezes Dariusz Baran zapowiedział rozliczenie banków wierzycieli.
108. Spółka walczyła ponad rok (...) próbowała dokonać restrukturyzacji, by w lutym 2003 r. ostatecznie dokonać żywota.

When mapped onto the target domain, the HEALTH/ ILLNESS scenario provides a useful conceptual handle on various business related concepts. More specifically, we tend to comprehend the target axiological concepts of *successful* and *poor business performance* in terms of signs of *good* and *bad health*, respectively. The TREATMENT subdomain, in turn, corresponds to attempts at *improving* the functioning of business institutions or economies. The final stage of the scenario brings into focus either RECOVERY or DEATH experiential domains, which are extended onto *return to the state of prosperity* and *bankruptcy*, respectively.

If we take a closer look at specific lexical instantiations of this scenario, we see that the financial situation of a company/ business institution tends to be referred to as KONDYCJA or

FORMA (physical condition) which is either good or, quite to the opposite, poor (example 89, 90). The former is instantiated by the lemma ZDROWY (example 91) whose target meaning – well-organized/ well-functioning – has a well-recognized position in lexicographical resources (cf. USJP). The domain of PHYSICAL INDISPOSITION, on the other hand, subsumes some general references to physical or mental suffering, as conveyed by CIERPIEĆ, UCIERPIEĆ, ODCHOROWAĆ, which are typically projected onto the *material loss* suffered by business institutions (examples 93, 95) or *decrease in quantity or value* (examples 94, 98). It should be noted that some senses matching the corpus findings have been found in the USJP entry for CIERPIEĆ and UCIERPIEĆ (suffer a loss or damage). Moreover, UCIERPIEĆ deserves a mention as a case of sense reversal, which is to say that the figurative meaning (*material loss*) comes before the one relating to physical suffering in USJP. The USJP entry for ODCHOROWAĆ, on the other hand, is restricted to the source meaning of physical or mental suffering. In the corpus, the lemma highlights some *negative consequences* of economically unfounded increase in stock prices. This meaning seems to derive from the source notion of physical or mental indisposition which comes as *a consequence* of some prior experiences (example 101). Thus, the link between the two domains is established via the notion of a *delayed effect* that occurs after its cause has gone. Yet another lexical item worth mentioning here is that of BOLĄCZKA, which occurs exclusively in the context of mental suffering or discomfort and as such can be classified as morphological extension by our definition – although it shows a clear morphological affinity with 'boleć' (hurt, ache), it does not have any applications in the domain of bodily suffering. Of course, this notion, like most of the other ones discussed in this section, is subject to personification, that is, business institutions affected by a financial loss are conceived of as a suffering person.

In addition to these general signs of bad health or indisposition, the corpus has also revealed items referring to some more specific physical defects or aliments. Hence, KULEĆ, which brings into focus a leg injury disrupting a normal way of walking, is extended to the notion of *financial underperformance* (example 96). The verbs PARALIŻOWAĆ, on the other hand, highlights the condition marked by *complete inability to move*, which under metaphorical mapping, acquires the meaning of *complete lack of business activity*, or in other words, economic *slump* (example 97). The axiological senses associated with these two key items have been recognized by USJP compilers and listed as distinct meanings, which is indicative of their deep conceptual entrenchment in the mental lexicon. The same cannot be said about the phrasal item STAN PODGORĄCZKOWY, which seems to be employed on more idiosyncratic basis. It should be noted that in example (99) this phrase functions as a kind of pun, a play on words which draws on the tension between the notion of 'medicine market' (medicine – the substance supposed to prevent the signs of bad health) and the actual, that is poor, or in metaphorical terms *feverish*, state of this market.

Among the lemmas activating MEDICAL TREATMENT subdomain, there are also items representing different degrees of conceptual entrenchment. Thus, the target meanings of RECEPTA and ZASTRZYK seem to have fully conventionalized status. Their source senses, referring to the medical ways of *dealing with or preventing indispositions or illnesses*, are projected onto the target notion of *dealing with or preventing financial and other difficulties* as they arise in the world of business/ economic activity (example 103, 104). The target uses of

the remaining two items, that is REANIMACJA and WIWISEKCJA, are much less conventional, yet they are fully transparent for native speakers of Polish. It should be observed here that although these two items have been put under the common heading they are quite distant with respect to the underlying conceptual content they evoke. Thus, REANIMACJA as *a method of saving a person from death* corresponds to *endeavors to save a company/ business from bankruptcy* (example 102). WIWISEKCJA, on the other hand, brings into focus, *scientific experimenting on live animals*, which is extended to the concept of *a detailed examination* of something (as defined by USJP). The point is that although medical experimenting on animals brings about some positive results (e.g. increase of medical knowledge of human diseases), it raises lots of controversy for ethical reasons. Consequently, the negative evaluation of such practices is transferred onto the target domain where the lemma highlights some negative aspects of subjecting business institutions to very detailed examination (example 103).

Next, the attempts to improve business performance, conceptualized as different medical endeavors, bring about either success or failure. Thus, the source notion of *bringing somebody back to health* evoked by UZDROWIĆ is projected onto the target axiological concept of *bringing business institutions back to proper functioning*. In the Polish-language data this lemma typically occurs in the context of the poor state of public finances and various remedial measures taken in order to overcome those difficulties (example 104). The lemma OŻYWIĆ, represents yet another interesting instance of semantic extension. What is highlighted under metaphorization here is the source notion of bringing somebody back to life or, in other words, *the transition from the state of complete immobility to the state marked by motion*, *liveliness*, *energetic behavior* etc. This, in turn, gives us a conceptual handle on the target concept of an *increase in business activity after a period of slump* (example 106). Although it is marked as metaphorical by USJP, the intensity sense of OŻYWIĆ seems to be more entrenched in contemporary discourse than its source meaning of bringing somebody back to life, which is indicative of a diachronic semantic shift motivated by conceptual metaphors.

Finally, the linguistic items put under the *recovery* column: PRZEŻYĆ, UTRZYMAĆ SIĘ PRZY ŻYCIU, DOKONAĆ ŻYWOTA highlight the most basic bodily functions, that is *staying alive* and *dying*, which, when subjected to metaphorical mapping via personification, denote *avoiding bankruptcy* and *going bankrupt*, respectively (examples 107, 108). None of these items has been recognized by lexicographical sources as having equivalents in the domain of successful or poor performance.

7.7. Metaphorical clusters

Apart from single words and some fixed phrasal items, the Polish-language corpus has yielded a variety of more extended pieces of metaphorical language, which have been termed *metaphorical clusters* in the previous chapter (cf. 6.8). There is an enormous diversity of such clusters and their organization into some general categories is by no means a straightforward task. However, the cognitive approach, with its emphasis on the underlying experiential structures, seems to provide some useful tools for dealing with this chaos of linguistic forms and meanings in a systematic way. The taxonomy presented in the preceding chapter will be now

applied to Polish-language data. Thus, a distinction is made between consistent and inconsistent metaphorical clusters, as discussed and illustrated below.

Consistent metaphorical clusters are those deriving from a single schema or experiential domain, or a combination of conceptually related schemas. The corpus has provided clusters rooted in various schemas or domains of experience. They are listed below, together with some illustrative examples:

– UP clusters

109. Po niewielkiej zwyżce na otwarciu indeks największych spółek wspiął się do 1258 pkt, czyli w okolice szczytów poprzedniej fali wzrostowej z przełomu roku
110. Poza głównym kontraktem uwagę zwracają futures na Agorę i Prokom. Pierwsze znajdują się w trendzie wzrostowym po wybiciu z podwójnego dna (...)

– DOWN clusters

111. (...) analitycy zaczynają się prześcigać w prognozach jak nisko mogą spaść indeksy.
112. Po ogłoszeniu upadłości Piaseckiego kurs akcji tej spółki nurkuje do dna.
113. Pojawiła się jednak szansa na poprawę sytuacji leżącej już prawie na łopatkach budowlanki

– DEATH clusters

114. A stanowcze nie mówimy różnym pomysłom ubranym w hasła naprawy finansów publicznych, których autorzy mamią społeczeństwo perspektywami poprawy sytuacji gospodarczej. Tymczasem tak naprawdę oznaczają one zaciskanie sznura na szyi przedsiębiorczości
115. Niedawno próbowano zarżnąć kurę znoszącą złote jajka, czyli polskie hutnictwo szkła. (...) Biznes szklarski zaczął się bronić skutecznie. Zdaniem przedstawicieli branży, realizacja scenariusza zaproponowanego przez Energsys, mogłaby rozłożyć na łopatki rosnący szybko polski przemysł szklarski.

– FORWARD/BACKWARD clusters

116. Gospodarka światowa leciała dotychczas na dwóch silnikach (Chiny i USA). Jeden z nich zaczyna się krztusić, a drugi zrobi to niebawem.
117. Daleko poza czołówką znalazły się giełdowe lokomotywy.

– SLOW MOTION/BACK clusters

118. Dogonienie gospodarek krajów tworzących pierwszą „piętnastkę" krajów Uni Europejskiej ma zająć Polsce 60 lat. I to nie krajów najzamożniejszych, ale ciągnących się w ogonie tego peletonu.
119. Po sfinalizowaniu fuzji Heineken miałby blisko 40-proc. udział w polskim rynku i zdecydowanie zdystansowałby depczącego mu po piętach SABMiller.

– INSIDE/OUTSIDE clusters

120. Alitalia znalazła się w tarapatach i pewnie nie prędko uda jej się z nich wyjść.

Each of the source domains as exemplified above is evoked by more or less extended clusters of lemmas, which are rooted in the same or conceptually related experiential domains. Thus, in (109), 'wspiąć się' and 'szczyt' both represent UP schema, whereas example (110) high-

lights the interplay between UP (wybić się) and DOWN (z dna) schemata, which are naturally related at the experiential level.

As we have observed in the preceding chapter, metaphorical clusters differ not only in their length or complexity but also represent different degrees of linguistic entrenchment. For example, the target sense of *a substantial decrease in stock values* can be expressed in a highly conventional language, as in example (111), but also in a more creative way, as in (112). As has been observed on many occasions in this book, the degree of conceptual entrenchment of metaphorical items (both single words or more elaborate expressions) is traceable to their degree of prototypicality within a conceptual structure they derive from. Hence, the expression SPAŚĆ NISKO (fall to the low) seems to represent more central areas of DOWNWARD schema than NURKOWAĆ DO DNA (dive to the bottom). Even more elaborate exploitation of DOWN schema can be observed in (113), which represents a typical case of *image* or *one-shot* metaphor as defined by Lakoff and Johnson (1980). The source image of 'leżeć na łopatkach' (to lie on one's shoulder-blades') suggests 'being defeated in a fight', which, when mapped onto the performance of the building sector, allows us to comprehend the concept of economic *collapse* in this sector. The thing that should be emphasized at this point is that those more specific or vivid conceptualizations make their own unique contributions to the semantics of the target senses they convey. To give an example, in sentences (114) and (115) there are two different conceptualizations of the death, each of which presents a different picture of the target notion of *causing the collapse of business enterprises*. More specifically, 'zaciskanie sznura na szyi' ('tightening a string round somebody's neck) suggests a *slow* and painful death, which, in turn, corresponds to the *gradual* nature of *business/economic collapse*. The other expression 'zarżnąć kurę znoszącą złote jajka' (to slaughter a hen laying golden eggs), highlights a more *abrupt* nature of the phenomenon in focus ('zarżnąć' suggesting an instantaneous death). More importantly, the metaphor brings to light the *lack of common sense* behind the decision of shutting down glass works (no one with some common sense would kill a hen laying golden eggs). This evaluation is subsequently extended onto the target domain allowing us to get a grasp on the negative assessment of the business decision in question. The negative connotations of this expression are additionally reinforced by the use of the lemma ZARŻNĄĆ (slaughter), which highlights the notion of brutality in handling animals.

Example (116) shows some interesting extensions of the FORWARD schema. The world of global economy is conceptualized here in terms of an *airplane*, with Chinese and American economies being portrayed as *engines* of this airplane. Thus, the metaphorical meaning is based on the correspondence between the *proper functioning of an airplane* and *successful economic performance*. More specifically, the source image of the airplane engines *choking* corresponds here to the *possibility of economic collapse*.

In (117) an interplay between FORWARD and BACKWARD schema can be observed, the former being evoked by the key items such as CZOŁÓWKA (the lead) and LOKOMOTYWA (locomotive) and the latter by BYĆ POZA (stay behind). When mapped onto the target domain, LOKOMOTYWA and CZOŁÓWKA[43] refer to the successful performance of stock indices (which show rising tendencies). They also bring into focus the 'tractive' aspect – apart

[43] CZOŁÓWKA represents a classic example of *morphological extension* deriving from 'czoło' (forehead) the most frontal part of the human body.

from being ‘at the front’, locomotive is the causative force behind the motion of carriages or trucks linked to it. This, in turn, translates into the language of the target domain as the causative *force behind the rise of other stock indices*.

The combined SLOW MOTION and BACK schemas involved in the conceptualization of *business/economic competition* have also yielded some more complex extensions. Example (118) and (119) brings into focus the correspondence between the participants of a race and the economies of EU member countries – those least successful ones are conceived of as remaining at the very back of the group. (Note that OGON, which denotes the rear part of an animal’s body, is responsible here for the activation of the underlying BACK schemata). It should be noted in passing that the expression CIĄGNĄĆ SIĘ W OGONIE functions as an idiomatic expression in Polish lexicon, which is used to denote a general concept of doing (performing) *worse* than someone else.

Finally, example (120) illustrates the interplay between INSIDE and OUTSIDE schemata, which activate BEING INSIDE IS BAD and BEING OUTSIDE IS GOOD conceptual metaphors, whereby we get a conceptual handle on the target notions of *financial underperformance* and *overcoming financial difficulties*.

I now turn to what has been labeled as inconsistent metaphorical clusters. As specified in 6.9 the difference between consistent and inconsistent metaphorical clusters lies in that the former involves key items rooted in a single or related experiential structures, whereas the latter consists of lemmas activating experientially (and cognitively) distant structures. Consequently, consistent clusters form coherent (logical) images or scenes on literal reading, while inconsistent ones are opaque on literal reading. For example, PODNIEŚĆ PROGNOZĘ (lift a forecast) in (121) is meaningless if interpreted in a literal manner. It should be pointed out here that *inconsistent clusters* are quite rare in the Polish language data as opposed to the *consistent* ones which have a much more numerous lexical representation.

121. Spada mocno cena m.in. KB Home mimo że spółka wykazała bardzo dobre wyniki kwartalne i podniosła prognozę tegorocznych rezultatów.

In addition to consistent and inconsistent clusters as described above, the Polish corpus has yielded another interesting type of metaphorical clustering, which is illustrated in (122):

122. Widać po tym, że rynek szybko pozbierał się po nieoczekiwanym wybiciu w dół.

In this example UP and DOWN schemata are activated simultaneously, yet in a way which conflicts with their functioning at the experiential level: it is possible to ‘wybić się w górę’ but not ‘wybić się w dół’. Thus, although the expression in question relies on cognitively related schemas, the manner in which they are activated violates the typology of the source domain of spatial orientations and as such must be put under the rubric of inconsistent clusters.

8. Frequency data and comparative observations

The most straightforward observation that emerges from the studies presented in the two preceding chapters is that English and Polish language economic discourses depend largely on the same conceptual metaphors for axiological reasoning. In other words, the two languages draw on a number of common experiential domains, which, when metaphorically extended, allow us to distinguish between positive and negative business or economic trends. All these experiential structures as traced in the bilingual corpus are listed in the table below:

Table. 2. Source domains in English and in Polish subcorpora

Source domains	**Lang.**
UP	
Causative	E/P
Reflexive	E/P
Verticality	E/P
Top	E/P
DOWN	
Causative	E/P
Reflexive	E/P
Verticality	E/P
Bottom	E/P
Concave surfaces	**-/ P**
FORWARD/BACKWARD	
Lack of motion	E/P
Setting into motion	E/P
Forward	E/-
Increase in speed	E/P
Quick motion	E/P
Race/Front	E/P
Decrease in speed	E/P
Slow motion/Back	E/P
Backward motion	E/P
STRENGTH/WEAKNESS	
Physical power	E/P
Having a lot of physical power	E/P
Increase in physical power	E/P
Lack of physical power	E/P
Having little physical power	E/P
Reduction in the physical power	E/P
HEALTH/ILLNESS	
physical condition	E/P
health/well-being	E/P
indisposition/illness	E/P
treatment	E/P
recovery	E/P
death	**-/P**
VIOLENT BEHAVIOR	
being a victim of violence	E
EMOTIONAL STATES	
positive emotions	E
negative emotions	

The domains which are common to English and Polish include spatial orientations UP/DOWN, FORWARD/BACKWARD as well as the structures labeled as STRENGTH/ WEAKNESS and HEALTH/ ILLNESS scenario. English-language corpus has revealed two additional domains, labeled as VIOLENT BEHAVIOUR and EMOTIONAL STATES. Each of these source domains has been listed together with what we have termed *subschemas* or *subdomains*. The table specifies whether a given experiential substructure has been activated by linguistic items drawn from English (E) or/and Polish (P) part of the corpus.

These specifications clearly point to a significant degree of overlap between the two languages both at the level of the general source domains as well as their more specific instantiations. To be more specific, the general UP and DOWN schemas have been broken into two underlying patterns – CAUSATIVE and REFLEXIVE one depending on the presence or absence of the causation factor, respectively. Other aspects of UP and DOWN experiential structures, as highlighted under metaphorization in both languages, include vertical measurements (cf. VERTICALITY SCHEMA) as well as highest and lowest parts of entities (cf. TOP, BOTTOM schemas). The single discrepancy, as revealed by the data, concerns the structure named as CONCAVE SURFACES evoked by lemmas such as DOŁEK (hole) and DNO (bottom).[44] This type of conceptualization has been traced only in Polish-language part of the corpus.

The general MOTION scenario has been broken into four different, yet experientially (cognitively) related subdomains, that is LACK OF MOTION, SETTING INTO MOTION, FORWARD MOTION, and BACKWARD MOTION. The most productive of them, that is FORWARD MOTION has been further subdivided according to the pace aspect. Additionally, the lemmas dealing specifically with the *contest of speed* or *chase* have been put under the heading of RACE and traced back to the underlying FRONT and BACK schemas. As we can see, even such detailed categorizations appear to be common to the two linguistic systems under discussion.

Similar overlaps can be observed in the case of STRENGTH/ WEAKNESS and HEALTH/ ILLNESS source domains. In addition to their evaluative characteristics, the two former notions have been considered with respect to the quantitative aspect, that is *large* and *small* amounts of physical power. The latter, on the other hand, has been broken into as many as six different subdomains which together form a consistent experiential scenario. The single discrepancy recorded here concerns the subdomain of DEATH, which has been triggered only by Polish-language items giving us a conceptual handle on the target notion of *bankruptcy*.

Having said that, let us now move on to the quantitative analysis, the main goal of which has been to establish the productivity of particular metaphorical mappings, as identified at the qualitative stage of the analysis (cf. Methodology chapter). The frequency counts carried out on both corpora have yielded the following figures:

[44] It should be pointed out here that although the Polish DNO tends to be translated as BOTTOM, the two items seem to activate slightly different imagery, the latter being more general in conceptual scope than the former. More specifically, English BOTTOM refers to the general notion *of lowest parts or points* of entities irrespective of their shape whereas DNO tends to be conceived of as the *lowest parts of concave surfaces*. Consequently, the two lemmas have been considered to be the instantiations of two different image-schematic structures.

Table 3. Frequency counts

	SOURCE DOMAINS	English			Polish		
		KL	**RF**	**NF**	**KL**	**RF**	**NF**
1	UP	20	1119	81.28	22	1322	92.70
2	DOWN	22	818	59.41	18	753	52.80
3	MOTION	28	178	12.92	28	85	5.96
4	STRENGTH/WEAKNESS	2	212	15.39	3	167	11.71
5	HEALTH/ILLNESS	25	202	14.67	18	124	8.69
6	VIOLENT BEHAVIOUR	10	62	4.43	--	--	--
7	EMOTIONAL STATES	10	31	2.17	--	--	--
	TOTAL:	**117**	2622	**19.03**	**89**	2451	**17.18**

As can be seen, the frequency data have been organized according to the underlying experiential input. The first column gives the number of key lemmas evoking a particular source domain (KL). The second column, on the other hand, gives the raw counts of all the corpus occurrences of particular key lemmas (RF). These raw frequencies have been normed to the basis per 10,000 words of text so that English and Polish-language data could be compared and the normed frequencies have been presented in the last column (NF).

The table shows some differences in the productivity of particular source domains within each of the two languages. As regards the English-language data, we see that UP and DOWN schemas are the richest sources of metaphorically extended senses, both in terms of the number of the constituent key lemmas as well as the total number of their occurrence in the corpus texts (1119 and 818 occurrences, respectively). These two spatial orientations are followed by STRENGTH/WEAKNESS scenario, with a considerably lower number of occurrences (212 occurrences). Such discrepancies can no longer be observed between the next two most common source domains, i.e. HEALTH/ILLNESS and MOTION scenario (with 202 and 177 occurrences respectively). The two least productive source domains are VIOLENT BEHAVIOUR and EMOTIONAL STATES (62 and 31 occurrences respectively).

The Polish data show a very similar pattern. UP and DOWN schemas are most common, as shown by the token frequencies of the key lemmas (1322 vs. 753 occurrences). They are followed by STRENGTH/WEAKNESS and HEALTH/ILLNESS scenarios with the comparable frequencies of 167 and 124 occurrences, respectively. These figures place these two source domains far behind the most productive UP and DOWN schemas. The least productive turns out to be the MOTION schema with the overall frequency of 85 occurrence. I now turn to the comparison of these two sets of data.

The normed frequencies point to a slightly higher productivity of UP schema in the Polish language data with the mean score of 92.70 as opposed to 81.28 per 10,000 in the English corpus.[45] However, the other common source domains are more productively evoked by

[45] There seems to be a logical explanation of the higher productivity of UP schema in the Polish corpus. Namely, it serves as the main source of the target sense of *increase* whereas in the case of English-language data, this meaning is also derived from the productive FORWARD MOTION schema, which in turn, is underrepresented in the Polish part of the corpus.

the English language items. The most substantial discrepancy can be observed in the case of MOTION schema. Although both English and Polish corpora have yielded 28 relevant lemmas, the former has a much higher density of metaphorical meanings per 10,000 words (12.92), when compared to the former (5.96). In the case of STRENGTH/WEAKNESS and HEALTH/ILLNESS scenarios those differences are much less pronounced. That is, the former accounts for 15.39 occurrences per 10,000 words in English and for 11,71 occurrences in the Polish corpus. By the same token, HEALTH and ILLNESS related lemmas occur 15,61 times per 10,000 words in the English corpus, and only 8,69 times in the Polish-language corpus. As follows from the total number of occurrences given at the bottom of the table, the overall density of metaphorically extended meanings is slightly higher in the English corpus than in the Polish one (19.03 vs. 17.18 occurrences per 10,000 words of text).

It seems worthwhile to look now at our counts from a micro-level perspective, that is from the perspective of the frequencies of particular key lemmas constituting particular source domains. The general tendency observed in the data is that each of the source domains is activated by a low number of highly frequent key lemmas, and a large number of low-frequency items (usually single occurrences). For example, in English, UP schema is represented by five high-frequency lemmas (HIGH, GROW, RISE, VERB+UP, RAISE), which together account for 81.75% of all the relevant occurrences. The remaining 15 items account for merely 18.25% of the total occurrence of UP lemmas. If we now take a look at those most and least productive lemmas, we can see that the former are more prototypical instantiations of the underlying schema than the latter. For example, items such as FALL and LOW seem to be more central representatives of DOWN spatial orientation than DIVE or DOWNFALL, which are also much less common. The same tendency applies to the Polish data. To illustrate, the high frequency items SPADAĆ and NISKI are more central instantiations of DOWN schema than the low frequency STRZĄŚNIĘCIE and ŚCIĄGNĄĆ. By the same token, HEALTHY, SICK, or SUFFER are more prototypical members of HEALTH/ILLNESS scenario than the more specific symptoms of bad health such as ANEMIC, PNEUMONIA, SNIFFLE, or HANGOVER, which have much more marginal representation. A mention should also be made here of the observed tendency for the high frequency items to be replaced by their synonyms or semantically related items, which function on more idiosyncratic basis. For example, the highly conventional in Polish stock exchange commentaries lemma SZCZYT has been found to be replaced by WIERZCHOŁEK, which is just a more inventive way of referring to the *highest value*. The same tendency is found in English language data (cf. fall vs. dive, or rise vs. skyrocket).

As has been intimated earlier, frequency of occurrence can serve as a measure of cognitive entrenchment of linguistic items (the higher the frequency of occurrence, the greater the degree of cognitive entrenchment). Thus, it can be concluded that the items to be found at the bottom of the frequency lists tend to represent novel or 'one-shot' metaphors. This, in turn, coincides with the degree of prototypicality in that the lower frequency items, usually represent more peripheral areas of a given schema or experiential domain.

In addition to studying metaphors, as they structure the domain of business activity, some attention has been given to the dictionary treatment of metaphorically extended senses. As has been observed, dictionaries tend to list metaphorical meanings either as distinct ('core') senses or as the so called 'subsenses' (NODE) or 'shades of meaning' (USJP). Only

rarely are they labeled as metaphorical usage, and if they are, it is usually indicative of a rather low degree of cognitive entrenchment of those meaning. Furthermore, some instances of sense blending (mixing source and target meanings in one entry) and sense reversal (listing metaphorical meaning before the literal ones) have been traced in both sets of data. All this shows that the metaphorical underpinnings of many lemmas are becoming increasingly more obscure. Another observation emerging from the consideration of lexicographical resources is that some metaphorically extended notions have gained terminological status within the field of business/ economics or finance. Thus, business glossaries or specialized dictionaries (but also general dictionaries) typically include items such as: CRASH, POISON PILL, RECOVER/ RECOVERY, RALLY, SLUMP, DEPRESS/DEPRESSION. In the Polish-language material we also find items with terminological status such as ZWYŻKA (ZWYŻKOWAĆ), ZNIŻKA (ZNIŻKOWAĆ), UPADŁOŚĆ. Also, in both databases we have observed a tendency for more creative exploitation of the source domains. This gives rise to more creative or innovative metaphorical usage, which is not accounted for by lexicographical resources. Yet, given that these more creative forms derive from well-entrenched metaphorical mappings, they are fully transparent to native speakers of both languages.

These two sources of information, that is corpus-based frequency counts (C) as well as the relevant dictionary materials (D) clearly show that the notion of linguistic conventionality or entrenchment is a matter of degree rather than clear-cut distinctions. The relationship between the frequency of occurrence, prototypicality, and the dictionary status of extended senses can be sketched out as follows:

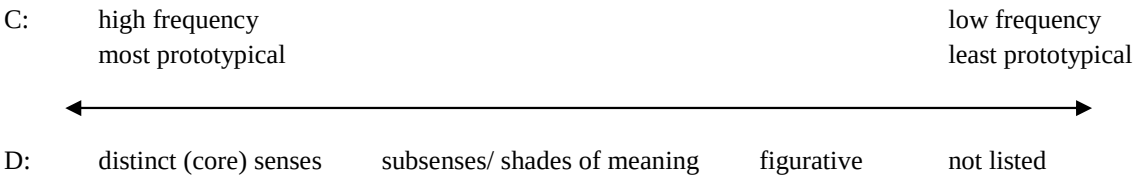


Fig. 8.1. Conceptual entrenchment vs. dictionary status of key lemmas**.**

Thus, at the extreme poles of the continuum there are the target senses marked by the highest and lowest frequencies of occurrence and characterized by the highest and lowest degree of prototypicality, respectively. The most conventional items have achieved the status of distinct, or 'core' meanings. On the other side of the scale, there are the lemmas whose target meanings have not been accounted for by lexicographical sources, which indicates their very low degree of cognitive entrenchment. This category embraces creative or novel metaphorical expressions (mostly various phrasal items). The lemmas granted the status of subsenses or the so called 'shades of meaning' seem to occupy some intermediate space between these two extreme poles of the continuum, together with the senses labeled as metaphorical, which are closer to the low frequency pole. The lemmas representing or approximating this low frequency pole tend to have a more specific reference. That is, they are capable of evoking more specific and thus more vivid mental pictures than the items characterized by a greater generality and conventionality (c.f. rise vs. skyrocket). Importantly, it is at this more specific end of

the continuum that various discrepancies between the two languages under investigation arise. Here is a sketch of some of those more specific semantic representations:

- objects for rising high up in the air (BALLON, SKYROCKET)
- technical devices for lifting entities (DŹWIGNIA, WINDOWAĆ, LEWAROWAĆ)
- sports activities (WYSKOK, WYBICIE)
- liquid/ water (DIVE, PLUNGE, SINK, DIP, NURKOWAĆ)
- trees (SHED)
- destruction (COLLAPSE, CRASH, ZAŁAMAĆ SIĘ)
- slippery surfaces (SLIDE, SLIP, ZSUWAĆ SIĘ, OBSUNĄĆ SIĘ)
- vehicles/ cars (STALL, JUMP-START, GRIND TO A HALT)
- machines (SEIZE, NAPĘDZAĆ)
- horses (SPUR, REIN IN)
- army (RETREAT, W ODWROCIE)

Hence, items referring to *objects for rising in the air* (BALLOON and SKYROCKET), as well as the lemmas bringing to mind *motion of vehicles* and *horses* have turned out unique to English-language part of the corpus. Conversely, lexical references to *technical devices for lifting objects or people* (DŹWIGNIA, WINDOWAĆ, LEWAROWAĆ) and sports activities (WYSKOK, WYBICIE) have been traced only in the Polish corpus. The other source structures, as listed above, can be found in both languages, although English appears to have a larger number of lemmas, which evoke such specific conceptualizations. For example, the *liquid* domain evoked by a range of English items (DIVE, PLUNGE, SINK, DIP) is represented by a single key lemma (NURKOWAĆ) in the Polish corpus.

It should be noted here that the continuum of conventionality as presented earlier applies also to more extended stretches of metaphorical language termed *metaphorical clusters*. As we have observed, in addition to expressions marked by deep conceptual entrenchment (including idiomatic items), there is also a whole repertoire of one-shot metaphorical clusters which appeal to our imaginative capacities and act as carriers of more elaborate meanings. These more extended pieces of metaphorical language have been divided into *consistent* and *inconsistent* metaphorical clusters. The former include expressions drawing on a single schema or on cognitively related schemas and the latter evoke unrelated or more distant experiential structures. As has been observed *inconsistent* clusters figure much more prominently in the English language data. In Polish they have a rather marginal representation.

Finally, a few words of comment are due to the morphological aspect of metaphorically extended meanings. The analyses presented in chapters (6) and (7) have revealed three types of lexical items:

(1) Lexical items that preserve their morphological forms under metaphorization (i.e. they have the same forms in the source and target domain). For example, all the inflectional variants of the source concept CLIMB (move to a higher position) are transferred without any modifications onto the target domain of a gradual increase in value. This is by far the most productive category, both in English and in Polish.

(2) Lemmas that represent morphological modification of source domain items and function only as target domain notions (cf. *morphological extensions*). In the English language, these are typically compounds of the following type: UPGRADE, UPSURGE, UPTURN,

UPBEAT, DOWNTURN, DOWNGRADE, SHORTFALL, UNDERPERFORM, SETBACK. The Polish language corpus has yielded the following forms that can be classified as morphological extensions: ZWYŻKOWAĆ, PODWYŻKA, ZNIŻKOWAĆ, UPADŁOŚĆ, SPADKOWY, OBNIŻKA, ZAPAŚĆ, ZASTÓJ, BOLĄCZKA. Unlike the English lemmas which depend on particles, prepositions, or content words for the activation of a particular source domain, the Polish lemmas draw on morphological associations which can be presented as follows:

ZWYŻKOWAĆ	←	wysoki/ wyższy/ wyżej
PODWYŻKA	←	podwyższyć/ podwyższać
ZNIŻKOWAĆ	←	zniżyć/ zniżać
UPADŁOŚĆ	←	upaść/ upadać
UPADŁY	←	upaść/ upadać
SPADKOWY	←	spaść/ spadać
OBNIŻKA	←	obniżyć/ obniżać
ZAPAŚĆ	←	zapaść się/ zapadać się
ZASTÓJ	←	stać/ stanąć
BOLĄCZKA	←	boleć

(3) Lemmas whose certain morphological forms (parts of speech) have exclusively or predominantly target domain applications (cf. *part-of-speech extensions*), whereas their other grammatical variants function both as source and target concepts. This phenomenon has been traced mainly in the English-language data and is represented by the following items:

- (adj.) PEAK
- (v) to PEAK
- (n) HIGH
- (n) LOW
- (n) SLUMP
- (v) SKYROCKET

Thus, the verbal and adjectival forms of the lemma PEAK relate to the domain of quantity, while the nominal form has both source as well as target domain applications. By the same token, noun forms of HIGH, LOW, and SLUMP tend to be defined in quantitative rather than 'spatial' terms by reference works, whereas their adjectival (HIGH, LOW) or verbal variants (to SLUMP) have both spatial as well as quantitative senses. Furthermore, SKYROCKET as a verb functions only within the target domain, denoting an increase in prices, rates, or amount.[46]

[46] A word of comment is due here to Polish language lexemes such as (n) PODWYŻKA, (n) UPADŁOŚĆ, and (n) OBNIŻKA, (adj.) SPADKOWY. Although these items represent semantic extensions restricted to a single part of speech (either a noun or an adjective), they are at the same time morphologically modified variants of the source lexemes (cf. e.g. 'podwyższenie' vs. podwyżka, 'spadzisty' vs. 'spadkowy', 'obniżenie' vs. 'obniżka'). Consequently, they have been classified as morphological extensions, not part-of-speech extensions.

9. Summary, conclusions and prospects

The present work has been inspired by ideas and assumptions underlying the cognitive theory of metaphor, which since the publication of Lakoff and Johnson's groundbreaking *Metaphors we live by* continues to provide the main point of references in uncovering metaphorical dimensions of our thought and language. As a matter of fact, these two dimensions must be investigated simultaneously, as metaphorical language provides an important window into the functioning of metaphorical mappings in our conceptual systems. Thus, the role of systematic and thorough investigations into metaphorical language cannot be overestimated. It should be obvious that corpora of authentic texts provide an important and sometimes even indispensable tool for this type of analyses, allowing to trace patterns of metaphorical usage across various registers and discourses and, especially, providing an insight into the productivity of various metaphors and the degree of their conceptual entrenchment.

The studies presented in this book have been restricted to business and economic discourse, and in particular to two broad target domains of *successful* and *poor business performance* (SBP/ PBP), which have been approached from a corpus-based, quantitative perspective. Our cross-linguistic study has revealed a number of concepts, each of them rooted in a different pattern of our bodily and/or cultural experience. One of the main sources of metaphorically extended senses have been spatial orientations UP/ DOWN/ FRONT/ BACK as well as various aspects of the MOTION domain. The specifics of the projections from the spatial source domains onto the target domain of business performance are summarized below:

(1) MORE IS UP/ UPWARD ⟷ GOOD IS UP/ UPWARD
UP ⟶ SBP (e.g. increase in business value, activity, business expansion, upward economic/ market trends)

(2) LESS IS DOWN/ DOWNWRAD ⟷ BAD IS DOWN/ DOWNWARD
DOWN ⟶ PBP (e.g. decline in business/ economic activity, collapse of business, downward economic/ market trends)

(3) MORE IS FRONT/ FORWARD ⟷ GOOD IS FRONT/ FORWARD
FRONT ⟶ SBP (e.g. increase in share values/ economic progress)

(4) LESS IS BACK/ BACKWARD ⟷ BAD IS BACK/ BACKWARD
BACK ⟶ PBP (e.g. decrease in business activity/ stock value/ efficiency)

(5) FRONT/ BACK ⟶ business competition

(6) LESS SLOW IS ⟷ BAD IS SLOW
SLOW ⟶ PBP (e.g. with little economic activity)

(7) MORE IS FAST ⟷ GOOD IS FAST
FAST ⟶ SBP (economic/ business expansion/ growth; increase in stock values)

(8) BAD IS LACK OF MOTION ⟶ economic slump, recession

(9) SETTING INTO MOTION ⟶ attempts at improving business performance

As has been shown in the diagrams, the mappings onto the target domain typically involve the activation of two overlapping metaphorical concepts (as indicated by double arrows); one of them is responsible for the general axiological meaning (SBP/PBP) and the other for the quantitative sense (increase/decrease). Additionally, the corpus has yielded instances of what might be termed 'metaphorical triplets', that is three conceptual metaphors rooted in a single experiential structure and activated concurrently. This kind of overlap occurs when the motion domain, activated by UP, DOWN, FRONT and BACK schemata, additionally highlights the notion of pace via LESS IS SLOW and MORE IS FAST metaphors, giving rise to the target sense of an increase by *small* and *large* amount, correspondingly. For example, the extensions of SHOOT UP and EDGE UP (as applied to stock values) seem to involve triplets of the following kind: GOOD IS UP / MORE IS UP/ MORE IS FAST and GOOD IS UP/ MORE IS UP/ SLOW IS LESS respectively.

The reservation to make is that the metaphorical projections as listed above represent cognitively most salient mappings, that is those which involve the preservation of the positive load associated with UP and FRONT schemas and the negative axiology of DOWN and BACK under metaphorization. As we have seen, this prototypical pattern can be reversed under the influence of the absolute values of trajector entities participating in a given relationship.

In addition to spatial orientations, also the experiential domains associated with good or poor physical condition labeled as HEALTH/ILLNESS scenario have turned out to be a rich source of metaphorically extended senses both in English and Polish-language business discourse. The relevant cross domain mappings are motivated here by straightforward axiological correlations, which are occasionally accompanied by quantitative metaphors, as specified if the diagram below:

(10) GOOD IS HEALTHY ⟷ MORE IS HEALTHY
(11) BAD IS UNHEALTHY ⟷ LESS IS UNHEALTHY

These general concepts are elaborated on in a number of different ways giving rise to a consistent experiential scenario which is extended onto the behavior of businesses institutions or economies along the following lines:

- PHYSICAL WELL-BEING ⟶ SBP/ of satisfactory quantity/ value
- PHYSICAL INDISPOSITION/ ILLNESS ⟶ PBP/ of unsatisfactory quantity/ value
- TREATMENT ⟶ attempts to improve business/ economic performance
- RECOVERY ⟶ improvement in business/economic performance
- DEATH ⟶ bankruptcy

Furthermore, the source domains of *strength* and *weakness* are subject to the following mappings:

(12) MORE IS STRONG/ GOOD IS STRONG
STRONG ⟶ SBP (in a secure financial position, upward market tendencies)

(13) LESS IS WEAK/ BAD IS WEAK
WEAK ⟶ PBP (not in a secure financial position, downward market tendencies)

The source domain of STRENGTH/WEAKNESS gives rise both to quantitative as well as axiological senses which tend to be activated simultaneously, as indicated in the diagrams. However, some instances of the reverse transfer have also been traced, mainly with respect to currencies, whose weakness (instead of strength) might be perceived as a desirable phenomenon under certain circumstances (especially in the context of export-import transactions).

In addition to the shared metaphorical concepts as presented above, the English-language corpus has yielded target senses rooted in domains labeled as VIOLENT BEHAVIOR and EMOTIONAL STATES . The former involves the following mapping:

(14) TO SUFFER PHYSICAL INJURIES ⟶ be affected by adverse business/economic phenomena/ be reduced in value/quantity

As we have observed, there is an ontological correspondence between a victim of various acts of aggressive behavior and companies, markets, economies etc. affected by adverse business/ economic phenomena. Also, business underperformance tends to be expressed in quantitative terms, that is as a decrease in value, quantity or intensity of business activity.

Finally, the clearly delineated axiology of the source domain of emotional states is directly projected onto the target domain, which results in the following mapping:

(15) FEELING GOOD ⟶ SBP (increase in value/ business activity)

(16) FEELING BAD ⟶ PBP (decrease in value/ business activity)

The conclusion that can be drawn from what has been presented so far is that the axiological transfer via metaphorical mappings proceeds by two different conceptual routes. The first one involves the spatial source domains which are not axiological in themselves, that is they acquire their evaluative load through a number of different experiential correlations. This axiological load is subsequently transferred onto the target domain of business performance. Consequently, the mappings seem to proceed here in two stages and as such can be termed as *indirect axiological transfer*. This can be summarized as follows:

UP
FORWARD
MOTION } IS GOOD ⟶ SBP

DOWN
BACKWARD
STANDSTILL } IS BAD ⟶ PBP

The second type of value transfer has its roots in the source domains which are inherently axiological (i.e. either positive or negative) and directly lend these valuations to the target concepts of SBP and PBP along the following lines:

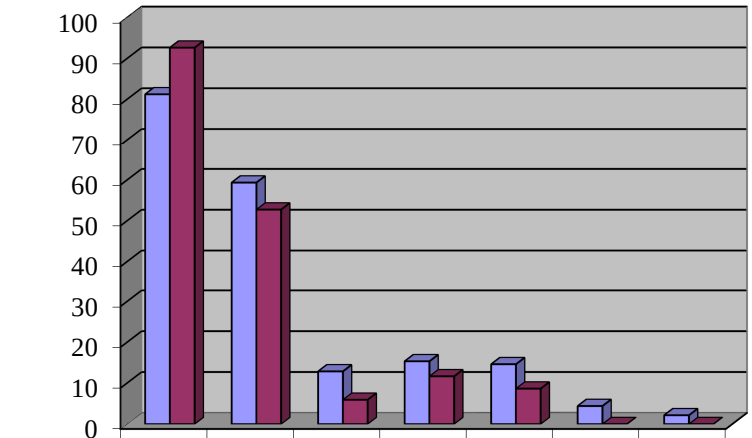
GOOD HEALTH
TREATMENT
RECOVERY
MENTAL/ EMOTIONAL WELL-BEING
(+) → SBP

POOR HEALTH
DEATH
SUFFERING RESULTING FROM ACTS OF VIOLENCE
MENTAL/ EMOTIONAL DISCOMFORT
(-) → PBP

The main difference between these two types of value transfer onto the domains of SBP and PBP is that the indirect transfer can be subject to reversal (e.g. BAD can be UP, or GOOD can be DOWN), whereas the direct one is irreversible (i.e. POOR HEALTH cannot be the source of positively valued concepts, and vice versa, GOOD HEALTH never gives rise to negatively loaded senses).

Turning now to the results of the quantitative analysis, the main conclusion is that English-language corpus shows higher density of metaphorical language both at 'macro' as well as 'micro' level of our enquiry. In other words, English-language economic discourse appears to be more diversified in terms of the number of different metaphorical models (seven as opposed to five traced in the Polish data) as well as in terms of the productivity of particular metaphorical concepts, the only notable exception being UP schemata, which has turned out to have a more numerous representation in the Polish corpus. These findings are presented in the table below:

Table 3. Productivity of metaphorical mappings: frequency data



	1	2	3	4	5	6	7
English	81,28	59,41	12,92	15,39	14,67	4,43	2,17
Polish	92,7	52,8	5,96	11,71	8,69	0	0

Finally, a mention should be made of the limitations of the present study and areas that need further investigation. The first and perhaps most problematic aspect involved in corpus-based research into conceptual metaphors is the reconciliation of what can be referred to as the *depth* and *range* of linguistic explorations. The point is that most conceptual domains (espe-

cially broad ones such as business performance) are structured by a range of metaphorical concepts, rooted in a variety of experiential domains. Each of these concepts, in turn, is represented by a large number of more or less conventional linguistic items such as single words, fixed collocations as well as more elaborate expressions. Thus, it seems that any research project in the field of conceptual metaphors should aim at tracing possibly the largest number of underlying metaphorical concepts together with possibly the most exhaustive collection of their linguistic instantiations. This, however, is an extremely challenging task, especially in view of the fact that studying metaphor still requires a massive expenditure of manual work as there are not, as yet, any reliable computer techniques that could significantly facilitate this process. Computer-based methods come to our assistance only at a later stage, that is after some judgments of metaphoricity have been made by the researcher. For example, word lists or concordancing programs can be employed to assess the rate of recurrence of the items traced at the manual stage of investigation (as has been done in this project). Thus, the issue of depth and range of corpus-based research into conceptual metaphors deserves some more consideration in future research.

Another point is that the present project has been concerned primarily with conventional linguistic expressions and some more creative items functioning as single words or fixed phrases. More extended stretches of metaphorical language (cf. metaphorical clusters) have been dealt with only in passing. Given that the cognitive approach provides useful tools for organizing and classifying the chaos of metaphorical meanings and forms, such extended metaphors, especially those representing novel uses, merit further explorations. Also, the cross-linguistic variation in the creative exploitation of the well-entrenched source domains deserves further contrastive study. This, however, will require larger linguistic databases and even greater expenditure of manual labour, a problem that seems to be best dealt with by setting up team projects.

Yet, despite all these limitations corpus-based research into metaphor can give us insights which can be gained in no other way. Most importantly, it gives us access to the information about the frequencies with which metaphorical expressions occur in authentic language use. This, in turn, seems to pave the way for large-scale comparisons of conceptual metaphors across different registers, genres and languages in terms of the degree of their conceptual entrenchment.

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