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ON THE DIVERSITY OF LINGUISTIC EVIDENCE FOR CONCEPTUAL METAPHOR

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ABSTRACT

In this article my main concern is the linguistic evidence for the view that metaphor is conceptual in nature. Since the fact that there is a great diversity of linguistic evidence for patterns of metaphorical thought has been, by and large, not emphasized enough, I overview a variety of such evidence, which can be derived from the study of different aspects of meaning within a particular language, crosslinguistically, and at a metalinguistic level. However, in itself the variety of linguistic evidence, even though it speaks very strongly for the idea that metaphor is conceptual in nature, is not sufficient to justify it. Therefore, recognizing the fact that claims about our conceptual system which are based on linguistic analyses alone remain within the "language – thought – language" circle, the article discusses also some kinds of nonlinguistic evidence for conceptual metaphors. Psycholinguistic research on metaphorical reasoning is presented as a major source of such nonlinguistic verifications. Drawing on Daniel Barenboim's *BBC Reith lectures* of 2006, it is also argued that convergent evidence from language and music may serve to break open the "language – thought – language" circle.

> "Metaphorical thinking being unavoidable, we might as well relax and enjoy it" (Langacker 2006: 108).

1. Introduction

It is now a common consensus view in cognitive linguistics that, as Lakoff – Johnson (1980: 6) put it, "[m]etaphors as linguistic expressions are possible precisely because there are metaphors in a person's conceptual system". [1] As a

[1] The idea that metaphor plays a fundamental role in shaping our conceptual system and in thought has been around in the philosophical and linguistic tradition of Europe much ear-

mode of thought, so the argument goes, metaphor guides not only our reasoning, but also our emotions, behaviour and actions. In fact, according to the standard theory, it is due to its conceptual nature that metaphor shows up so abundantly in everyday language as this is the medium via which we conventionally communicate to others about our emotions, thought, behaviour, and actions.

Likewise, it is the standard view among cognitive linguists that enduring patterns of metaphorical thought, commonly referred to as *conventional conceptual metaphors*, are frequently motivated, or *grounded*, by *image schemas* (such as SOURCE – PATH – GOAL, UP/DOWN, FORCE), which are universal patterns of experience of the human body and its interaction with the world (Johnson 1987, 2005; Lakoff – Johnson 1999). The latter view – known as the thesis of *embodiment* of conceptual metaphor – constitutes one of the cornerstones of the cognitive approach to metaphor.[2]

Although the embodied experience of the world and the self provides the main motivation for the metaphors "we live by", conceptual metaphors are, by no means, necessarily based on bodily experience. As has been extensively discussed in cognitive linguistic literature, culture is another major source of motivation for conventional metaphors a particular society "lives by".[3] In brief, conceptual metaphors are both universal and language-specific. This, it needs to be noted, should not be taken to imply that universal experience necessarily leads to universal metaphors, since embodied experience can be overridden by cultural factors and cognitive processes.

It is beyond doubt that the cognitive theory of metaphor has had a great impact not only on the study of meaning in language, but also of human behaviour, action, and of understanding, in particular. Yet, as Gibbs – Perlman (2006: 212) rightly note, "[d]espite the tremendous success, and increasing popularity of cognitive linguistic work on metaphor there are numerous criticisms of this research both within and outside linguistics". In this paper, however, the critical appraisal of the cognitive theory of metaphor will be taken up very briefly only (section 2.6),[4] as my main concern here is the linguistic evidence for the conceptual nature of metaphor. In my view, the fact that there is a great diversity of linguistic evidence for patterns of metaphorical thought has been, by and large, not emphasized enough. It will thus be the main aim of section 2 to present this variety of evidence, which we can derive from the study of different aspects of meaning within a particular language, crosslinguistically, and at a metalinguistic

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lier; for the relevant overviews see, for example, Krzeszowski (1988) and Jäkel (1999).

2 For more on image schemas and the idea of embodiment of meaning see, for example, Gibbs (2005), Johnson (2005), Grady (2005).

3 For an overview, see, for example, Kövecses (2005); see also Górska – Radden (2005).

4 For a recent contribution to this debate see, in particular, Kövecses (2008).

level. In section 3, in turn, I will present some of the recent psycholinguistic research which strongly supports the central claim of cognitive linguistics that metaphor is a matter of thought, reasoning, and action.

Viewed from a more distant perspective, my overarching aim here is to resume the discussion of the conceptual nature of metaphor. My own contribution towards this end will be presented in section 4, where, relying on a sample of my case study of the metaphor LIFE IS MUSIC, which formed the backbone of Daniel Barenboim's *BBC Reith lectures* of 2006, I will argue that reliance on the speakers' and listeners' conscious awareness of a particular conceptual metaphor may provide direct evidence for the role of metaphor in understanding and in action as well as in structuring creative thought.

2. Diversity of linguistic evidence

2.1. Systematicity of metaphorical expressions

The most common kind of evidence for making claims about the conceptual nature of metaphor derives from the systematicity of metaphorical expressions which are used to talk about a particular target concept. Consider, first, a data sample from the *Macmillan English dictionary* (*MED*):

1) a. The baby *arrived* just after midnight.
   b. I *set out* to become a doctor, but it never worked out.
   c. She *went through* life without ever knowing the truth.
   d. This event *moved* his life in an unexpected direction.
   e. It's all been an *uphill* struggle.
   f. He *embarked on* a new career.
   g. They remembered *the departed* in their prayers.

Clearly, all the expressions in italics are conventional means of talking about birth, life and death in terms of the expressions which in their basic sense are used to talk about journeys. The examples represent but a fraction of the "journey lexicon" which has been conventionally extended to acquire metaphorical senses designating some aspect of the concept of LIFE, including the concepts of BIRTH and DEATH. The key of the argument here is that the systematicity of metaphorical linguistic expressions in (1) manifests particular patterns of metaphorical thought, and that without the metaphorical reasoning based on these patterns it would be difficult (if possible at all) not only to talk, for example, about progress, choices or goals in life, but also to think about them and act accordingly. The relevant conceptual metaphors are commonly named as: BIRTH IS ARRIVAL, LIFE IS A JOURNEY, DEATH IS DEPARTURE. Observe also that

these metaphors have a clear motivation in our basic bodily experience of directed motion along a path which we acquire (with some persistence and effort needed to learn how to walk) in early childhood, and which stays meaningful throughout our whole life in the form of what is labelled: the SOURCE – PATH – GOAL image schema.

Note further that underlying our metaphorical understanding of, e.g., progress, difficulties or goals in life, there is an intricate system of metaphors called the EVENT STRUCTURE METAPHOR (Lakoff 1993). Some of the constituent metaphors (or else, the mappings) of the EVENT STRUCTURE METAPHOR are given in (2); for illustration, reference to some of their linguistic manifestations which were listed in (1) is given in brackets.

2) a. STATES ARE LOCATIONS (see (1a))
   b. CHANGE IS MOTION (see (1b))
   c. CAUSES ARE FORCES (see (1d))
   d. ACTION IS SELF-PROPELLED MOTION (see (1c))
   e. PURPOSES ARE DESTINATIONS (see (1d, e))
   f. LONG-TERMED PURPOSEFUL ACTIVITIES ARE JOURNEYS (see (1c, f)).

It appears, then, that LIFE IS A JOURNEY is a specific metaphor which inherits the structure from the EVENT STRUCTURE system. Moreover, understanding life as a purposeful activity represents a more general pattern of metaphorical thought in terms of which other purposeful activities can be conceived as a journey (cf., e.g.,: LOVE IS A JOURNEY, ARGUMENT IS A JOURNEY). The EVENT STRUCTURE METAPHOR itself is a complex system of metaphors which interact in providing coherent understanding of some of the fundamental abstract concept, such as: STATE, CHANGE, CAUSATION, PURPOSE and ACTION. Most importantly, since such concepts constitute the very core of our conceptual system, "the fact that they are conceptualized metaphorically shows that metaphor is central to ordinary abstract thought" (Lakoff 1993: 222).

2.2. Polysemy and novel semantic extensions of everyday language

As has been repeatedly shown in cognitive linguistic literature, polysemy is the norm for language. In the case of English, for example, 97 of the 100 most common words in English are polysemous (see Gibbs 1994: 157). Crucially, a great variety of research has demonstrated that (aside metonymy) conceptual metaphor is one of the two driving forces behind polysemy both in the lexicon and in grammar. For the present purpose, let us consider a fraction of the lexicon which we conventionally employ in English to talk about the functioning of mind, as in:

3) a. It took me ages to *latch on* to what she was talking about. (*CALD*)
   b. He *ground out* the same ideas that he's been talking about for twenty years.
   c. She's *running out of steam* and I don't believe she'll ever manage to finish this novel.

The verbs *latch*, *grind*, and the expression *run out of steam* in their basic sense refer to the functioning of some mechanical device or machine, while in their extended metaphorical senses they characterize some functional aspect of the mind. The conceptual metaphor which motivates semantic extensions such as those in (3) is called MIND IS A MACHINE. Observe also that this pattern of metaphorical thinking is motivated by cultural experience in a broad sense of the term.

Note now that, as our understanding of the functioning of the mind has become more sophisticated and precise in the computer age, within the life-span of one generation a new vocabulary from the COMPUTER domain has become a conventional means of talking about the MIND. The examples in (4) are but a fraction of this new lexicon of MIND:

4) a. I wish I could *erase* some *files* from my memory.
   b. My (*operating*) *system crashed*.
   c. You gave me a lot of *input* to think about.
   d. My *disc* is full, I won't *process* anything more today.

The data in (3) and (4) are telling in two respects. Firstly, they show that, even though the expressions in (3) might be said to be "linguistically frozen", the MIND IS A MACHINE metaphor is still conceptually "alive", as is revealed by the expressions in (4). Secondly, since this new lexicon of MIND has already become conventional (at least for the computer generation), the MIND IS A MACHINE metaphor appears to have a more specific variant MIND IS A COMPUTER. In brief, the system of conceptual metaphors is "alive" not only in that it motivates novel semantic extensions in a language, but also in that it itself may change to reflect new patterns of metaphorical thinking.

2.3. Metaphorical language of everyday and literary metaphors

Contrary to the established wisdom which holds that the genius of great poets and writers gives rise to the majority of metaphors we know, it is now an established view in cognitive linguistics that, as Lakoff – Turner (1989: xi-xii) put it: "Great poets can speak to us because they use the modes of thought we all possess", of which "metaphor is a primary tool for understanding our world and our selves". It has become evident that cognitive mechanisms that are commonly

employed in the poetic reworking of ordinary metaphors reside in: (i) extending the elements of the source domain, i.e. introducing new elements to the conventional mappings; (ii) elaboration of the well-established elements of the source domain; (iii) questioning the validity of conventional metaphors; and (iv) combing conventional conceptual metaphors.[5]

To give one illustration, let me refer to Freeman's (2000) study of Emily Dickinson, and her analysis of the metaphors of TIME in the following poem:

5) They say that "Time
assuages" –
Time never did assuage –
An actual suffering
strengthens
As sinews do – with Age –

Time is a test of
Trouble –
But not a Remedy –
If such it prove, it
prove too
There was no Malady –

In this poem, Dickinson questions our well-established conventional metaphor TIME IS A HEALER, which is manifested linguistically in, for example, a common saying "time heals all wounds".[6] As Freeman (2000: 267) notes, Dickinson denies the TIME IS A HEALER metaphor aiming to show that "true suffering is everlasting". Rejecting the idea of TIME as "an agentive figure working against the ground of suffering", she "replaces it by reversing figure and ground": in the

[5] See, e.g., Gibbs (1994), Turner (1987, 1996); for overviews see Kövecses (2002) and Gibbs (2008).

[6] This understanding of TIME as CAUSER is motivated by our everyday metaphorical reasoning about external "agentless" events as actions. In our everyday understanding of events we frequently "ascribe the occurrence of a particular event to a nonincidental property indispensably involved in that event" (Lakoff – Turner 1989: 37), and thereby establish a causal link between the occurrence (e.g. the healing of a wound or disappearance of pain) and some nonincidental property of the event's occurrence (cf. events always require time for their occurrence and the passage of time is, in our folk view, an indispensable property of time). As soon as the causal link is established, we can metaphorically portray an event as an action with a wilful agent of some sort (i.e. we can apply the EVENTS ARE ACTIONS metaphor, see Lakoff 1993, and also section 2 above). Note further that TIME is also personified as, e.g., a THIEF (as in: *Time has stolen her youth/beauty*), a DESTROYER (as in: *Time has destroyed her youth/beauty*); for more on personification of TIME in literature, see also Lakoff – Turner (1989: 34-43).

second part of the poem, "trouble" is selected as "the figure against the ground of time". In effect, Dickinson conceives of time as a criterion by which a suffering can be evaluated. Moreover, as Freeman argues, "[t]he words *test* and *prove* suggest the methodology of science, by which *actual* experience can be empirically verified", and in effect, "[w]hat is being suggested in this poem is that some metaphors are better than others in enabling us to understand life's experiences" (Freeman 2000: 267).

For our immediate purpose, the tight conceptual bond which underlies the conventional and the literary usage of metaphorical language can be said to provide strong evidence for the conceptual nature of conventional metaphors and for the role which conceptual metaphors play in our making sense of the world and of our selves. Given the conceptual nature of metaphor, an alternative "scenario" wherein conventional and literary metaphors had nothing in common, is highly unlikely, if possible at all.

2.4. Crosslinguistic studies and metaphorical thought

2.4.1. Lexicalization patterns

Since Talmy's (1985) pioneering study, lexical coding of conceptual categories, i.e. *lexicalization* in the synchronic sense of the term,[7] has been extensively studied in a crosslinguistic perspective. Focusing on metaphorical extensions, let us briefly consider the coding of motion event, which has been the best documented case of lexicalization so far (see, in particular, Slobin 2004; Filipović 2007).

Of the three characteristic components of a motion event – (FACT OF) MOTION, MANNER (OF MOTION), and PATH (OF MOTION), the latter served as basis for drawing the typological contrast between two major kinds of conflation patterns which are typical of the so-called *satellite-framed* languages (S-languages, represented by most European languages (including English) other than Romance languages, and also Finno-Ugric, Chinese and Ojibwa (an Algonquian language)) on the one hand, and of the so-called *verb-framed* languages (V-languages, represented by Romance, Semitic, Japanese, and Polynesian) on the other hand. In an S-language such as English, PATH is coded overtly in a SATELLITE to the verb, i.e. an element associated with the verb (e.g., a particle or an affix), while in a single verb root (or lexeme) MOTION is conflated with MANNER, as in (6a):[8]

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7 For the diachronic sense of this term and its principled distinction from *grammaticalization* see Brinton and Traugott (2005).

8 Examples in (6) after Özaçalişkan (2005: 209-210).

6) a. *He ran into the house*.

b. *Eve girdi.*

'He entered the house.'

c. *Eve koşarak girdi.*

'He entered the house running.'

By contrast, in a verb-framed language such as Turkish, PATH is conflated in a single verb root (or lexeme), as in (6b), while MANNER is coded overtly by, for example, participles derived from manner verbs (see, for example, *running* in (6c)) or manner adverbs.[9] Moreover, numerous empirical studies of the literal language show that in a V-language the manner information tends to be left out unexpressed, i.e. (6b) represents the default coding, while (6c) is used only when the manner information becomes particularly salient (see Özaçalişkan 2005 and the literature cited therein). It is also evident that, unlike V-language speakers, speakers of S-languages pay far more "linguistic attention" to MANNER – they regularly and easily provide information about MANNER, using their default conflation pattern (as in (6a)) as well as a variety of alternative lexical means of encoding MANNER (participles, adverbs, etc.). This is particularly interesting, in view of the fact that speakers of a V-language like Turkish, even though they cannot easily code MANNER at the level of motion verbs, have at their disposal a variety of other lexical means which they may use to encode manner (see, for example, (6c); see Özaçalişkan 2005: 211). Note also that there is ample evidence from crosslinguistic empirical studies of literal language that this effect of the typological contrast in conflation patterns crosscuts boundaries of culture, language family, and geographical location (see Özaçalişkan 2005: 210).

Let us now turn to metaphorical motion events. It has been shown repeatedly that motion in space is a very frequent source domain for metaphorical understanding of diverse abstract concepts. In English, for example, motion verbs are systematically extended to designate a variety of concepts, including:

7) a. TIME (e.g.: *time is flying*, *hours crawl by*).
b. IDEAS (e.g.: *Her message came across easily*; *The idea sprang back into her mind*).

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[9] This characterization should not be taken to refer to "pure" S- and V-languages, but to prototypes of such language only. In a prototypical S-language like English, for example, aside a very rich lexicon of MANNER verbs (e.g.: *run*, *fly*, *crawl*), there is also a sizeable group of PATH verbs (e.g.: *enter*, *ascend*), and also some neutral verbs, such as *move* where neither PATH nor MANNER component is conflated, and only (the FACT OF) MOTION is coded.

c. EMOTIONS (e.g.: *A hint of emotion entered his voice for the first time* (*MED*)).
d. ECONOMY (e.g.: *a run-down of stock levels*)
e. LIFE (see the data in (1) above).

For our purpose, the results of Özaçalişkan's (2005) study of metaphorical motion events in English and Turkish are immediately relevant. Relying on a huge body of data from written texts and also on elicited responses from native speakers, Özaçalişkan has shown that the above described typological effect of the lexicalization patterns is highly apparent not only in the literal uses of the lexicon, but also becomes evident in the metaphorical extensions of the lexicon in these two languages. Summing up her results, she observes that English speakers and writers encode manner of motion at a higher rate than Turkish speakers and writers – "both in the use of motion verbs (59% compared to 27%) and in using alternative lexical means to encode it (133 instances to 81 instances)" (Özaçalişkan 2005: 236).

With regard to patterns of metaphorical thought, Özaçalişkan's results cannot be overestimated. Crucially, they indicate that "the contrast in the encoding of MANNER in the source domain is also likely to have effects on our conceptualization of the target domain of a metaphorical mapping" (2005: 238-239). For example, English speakers are more likely to have a more elaborate representation of TIME AS A MOVING ENTITY, with the ability to detect and report more fine-grained distinctions in their experience of time, as in (8a):

8) a. *time creeps*, *time crawls*, *time drags*
b. *time passes*

For Turkish speakers, on the other hand, the same pattern of metaphorical thought motivates "a more general sense of time passage as motion along a path [see (8b)], with fewer shades of difference in the way time is conceptualized to move" (2005: 239).

When put in general terms, crosslinguistic studies of lexicalization patterns may be said to provide a direct insight into similarities and differences in patterns of metaphorical thought, and thereby into similarities and differences in understanding of abstract concepts by speakers of different languages. At this point, however, a word of caution is in order. Özaçalişkan's study did not involve any cognitive tasks and thus, as the author herself explains, "the claims raised about the potential effects of language on cognition are only a prediction … and therefore should be regarded as in need of future empirical verification" (2005: 242, note 4).

2.4.2. Grammaticalization patterns

Crosslinguistic research into diachronic semantic change abounds in arguments for cognitive foundations of grammar (see e.g. Heine – Claudi – Hünnemeyer 1991; Heine 1997; Heine – Kuteva 2002), and what is immediately relevant, conceptual metaphor is often recognized as "the driving force" (see, e.g., Heine – Claudi – Hünnemeyer 1991: 226) behind the so-called *grammaticalization* , i.e. a (typically) unidirectional process which leads from more concrete lexical (i.e. less grammatical) forms and constructions to more abstract (i.e. more grammatical) ones.[10]

To illustrate, lexical verbs denoting physical motion in space, such as the English *go* in (9a):

9) a. *He is going to the woods*.
b. *He is going to go to/work in/buy the woods*.

may develop into grammatical forms or construction with a temporal sense of future, as was the case of the English *going to* (see (9b)). This grammaticalization pattern has been attested in typologically different languages (see Heine – Kuteva 2002: 161-163); aside Germanic languages like English, also in Romance languages (cf. the French *aller* 'to go (to)' as the future marker), Nilo-Saharan languages (cf. the Bari *tu* 'go' as the determinative future marker), and Dravidian (cf. the Tamil *poo* 'go' as the auxiliary marking future tense), to name but a few.

To take another crosslinguistically very common grammaticalization pattern, lexemes denoting physical objects or their parts may be metaphorically extended to acquire far more abstract senses, as is illustrated by the body part *back* in English, which developed a purely spatial sense of 'outside area behind sth' (cf. *The kids are playing out the back* (*MED*)). And here again, the same path of change has also occurred in typologically diverse languages, such as Icelandic, Halia, and Tzoltzil (see Heine – Kuteva 2002: 47-48).

Crucially, crosslinguistic studies into the unidirectionality of metaphorical grammaticalization patterns have led Heine – Claudi – Hünnemeyer (1991: 48) to postulate a striking generalization – a chain of *categorial metaphors*, given in (10):

10) PERSON > OBJECT > SPACE > TIME > QUALITY,

[10] In grammaticalization literature, the role of conceptual metaphor in the development of grammatical meanings has been a matter of much debate. Other mechanisms which are often mentioned in this context include metonymy, inference and implicature, subjectification; for an overview see, in particular, Brinton and Traugott (2005), and also Langacker (1998).

where each category can be understood as representing a conceptual domain (such as PERSON or TIME) which may function as the source domain for conceptualizing any other domain to its right. In effect, the chain consists of a number of categorial metaphors, such as SPACE IS AN OBJECT, TIME IS SPACE, etc. By way of illustration, consider the lexeme *megbé* 'back' in Ewe, a Niger-Congo language (see Heine – Claudi – Hünnemeyer 1991: 65-69, 222-225). In its basic sense, it designates a body part, hence a concept of the OBJECT category (see (11)).

11) *épé* *megbé* *fá*
3SG.POSS back be.cold
'His back is cold.'

12) *éle* *xo* *á* *megbé*
3SG-be house DEF behind
'He is behind the house.'

13) *ékú* *Ie* *é-megbé*
2SG-die be 3SG.POSS-behind
'He died after him.'

14) *é-tsí* *megbé*
3SG-remain behind
'He is backward/dull.'

And its metaphorically extended senses include: spatial location as in (12), temporal sense as in (13), and the sense of mentally retarded, as in (14), hence the category of QUALITY. And in this case again, the chain of categorial metaphors in (10) crosses the boundaries of language families and cultures (see Heine – Kuteva 2002).

In sum, the unidirectional arrangement of grammaticalization patterns in (10) shows that "concepts which are more immediately accessible to human experience are employed for the expression of less accessible, more abstract concepts" (Heine – Claudi – Hünnemeyer 1991: 51) which strongly suggests that the driving force behind them are indeed metaphorical patterns of thought.

2.5. Metalanguage of science

Shifting to metalinguistic manifestations of metaphorical thought, let us now take the science of language as the source of data in point. Specifically, let us have a look at Langacker's discussion of two fundamental issues that keep recurring in linguistics – continuity and discreteness (Langacker 2006). These issues pertain to a whole range of descriptive and theoretical problems, of which Langacker considers genetic relationships of languages, grammatical constitu-

ency, determinacy of syntax, and polysemy. When discussing the latter, Langacker gives a critical assessment of the so-called *network metaphor*, which underlined his well-known network model of complex categories (Langacker 1987), compares it with the *continuous field metaphor*, which lies behind Allwood's (2003) continuous meaning potential model and Zlatev's (2003) use-potential model, and concludes that the network metaphor, even though it gave rise to insightful analyses of polysemy, is "misleading by virtue of being overly discrete" (2006: 146); on the other hand, "the continuous field metaphor is misleading by virtue of being insufficiently discrete" (2006: 146). By way of reconciliation, he refers to Langacker's (2004) *mountain peak metaphor*, which, despite its own limitations, "has the proper mixture of discreteness and continuity" (2006: 147). The characterization of the mountain peak metaphor is a prime example of the metaphorical metalanguage, and therefore it is worth quoting here *in extenso*:

15)

> Instead, we might distort things less by *comparing an element's range of meanings to a mountain range*, which occupies a continuous expanse but is very uneven owing to *rises*, *depressions*, *peaks*, *and valleys*. *Counting the senses of a lexical item* would then be analogous to *counting the peaks in a mountain range*: how many there are depends on how salient they have to be before we count them, and they appear discrete in the first place only because we ignore how they grade into one another at *lower altitudes*. The uncertainty we sometimes experience in determining which particular sense an expression instantiates on a given occasion is then to be expected. *The uses in question are like points in the valley between two peaks*. It is essentially an arbitrary matter whether *we assign such points to one peak*, *to the other*, *to both*, *or to neither* [all emphases mine].
>
> (Langacker 2004: 48)

Needless to say, from the cognitive perspective, it is not only the metalanguage of linguistics that is metaphorical, but also the way we conceive of language, in the first place (see the seminal paper by Reddy 1979). As Langacker put it: "In one way or another, virtually all thinking about language – both on the part of linguists and by ordinary speakers – is metaphorical in nature" (2006: 107). And crucially, formalist and functionalist approaches to language differ in the extent to which their metaphors imply discreteness, with formalist metaphors tending towards discreteness, since it "offers the attractive prospect of rigorous, economical, and elegant formalizations revealing the true mechanisms of language at every level" (Langacker 2006: 108). And yet, as Langacker shows, the discreteness metaphors that formalists rely upon are "not just inappropriate but seriously misleading" (2006: 108). For, even though viewing a particular phenomenon as discrete or continuous is a matter of construal, the choice is by no means arbitrary. Instead, as Langacker argues, it should reflect the way the

world is intrinsically (see 2006: 114). Crucially, moreover, a typical phenomenon is far too complex for one metaphor to be able to grasp all its intricacies. As in the case of our everyday conventional metaphors, a particular metaphor employed in a scientific theory may highlight a particular aspect of the phenomenon while hiding some other aspect or aspects, as is the case with the wave metaphor and the particle metaphor that are used in modern physics to describe the nature of light (this example is also referred to by Langacker 2006: 114). In such cases, a particular metaphor is misleading whenever it is claimed to describe and explain the nature of a given phenomenon as a whole.

2.6. Concluding remarks

The variety of evidence from metaphorical language discussed thus far itself speaks very strongly for the conceptual nature of metaphor. Still cognitive linguists are well aware of the fact that reliance on language in making claims about metaphorical thought has some evident drawbacks. On the one hand, the cognitive theory of metaphor is still in need of clear and generally agreed upon criteria for identifying, on the one hand, metaphorical expressions and conceptual metaphors on the other hand.[11] Recently, however, some interesting proposals have been made which aim at making the analysis of language data more reliable. One such proposal is the so-called *principled polysemy approach*, which was developed by Tyler – Evans (2003) and Evans (2004), and which considerably constrains rampant polysemy in general, and excessive metaphorical extensions, in particular.[12]

Equally relevant is the counterargument of "circularity", which is often posed against the logic of research practice in cognitive linguistics: "Analysts first examine linguistic expressions, enough so to infer the possible presence of underlying metaphorical mappings, and then test this possibility by referring back to language" (Gibbs – Perlman 2006: 215). This "language-to-thought-to-language circle", however, is, as Gibbs – Perlman rightly observe, "not particular to cognitive linguistics" – formal approaches like generative linguistics are also confronted with the same problem "in identifying various syntactic patterns" (2006: 215). A way out to break open this circle is to provide some nonlinguistic evidence which would converge with claims based on metaphorical language. And, indeed, there is an increasing body of nonlinguistic evidence supporting the view that metaphor is conceptual in nature. The issues is commonly discussed under the rubric of nonlinguistic realizations of conceptual

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11 See, in particular, Gibbs – Perlman (2006) and the literature cited therein.

12 For a more elaborate formulation of this approach, called the *theory of lexical concepts and cognitive models*, see Evans (2006).

metaphor, such as in films, cartoons, drawings, sculptures, advertisements, symbols, myths, dreams, and gestures.[13] Naturally, a great variety of nonlinguistic manifestations is to be expected if, as cognitive linguists argue, metaphor is a matter of thought, perception, and action.

3. Psycholinguistic research

By now, the view that metaphor is conceptual in nature has gained a lot of support from many psycholinguistic studies (for overviews see, e.g., Gibbs (1994, 2008), Giora (2003), and Gibbs – Perlman (2006). For our immediate purpose, I will present briefly one psycholinguistic approach to understanding narratives and characterize a new line of experimental research into the so-called *simulation semantics*.

3.1. Understanding narratives

In this section I will discuss a pilot study which I conducted during the spring semester 2008 in the Institute of English Studies at Warsaw University. The objectives of my study were twofold. Firstly, as in Gibbs's (2005) study, I wanted to establish how conceptual metaphor operates in inferencing based on narrative texts. Secondly, my aim was to see how the participants (forty-nine graduate students of different age groups (aged 20-45) who were all fluent in English) would cope with the situation of discrepancy between the explicit linguistic coding and the detailed understanding of the narratives. The experiment was done during the first class of the course on *Conceptual metaphor*, and this assured that about 90% of the students had no prior idea of the cognitive theory of metaphor. Part 1 of the experiment was entirely based on the study by Gibbs (2005: 125-129) – the same data was used and the same questions were asked. Students were first instructed to read two stories about love relationship given here in (16) below:

16) Story A
Imagine that you are a single person. A friend sets you up on a blind date. You really like this person and start dating a lot. Your relationship was moving along in a good direction. But then it got even better. The relationship felt like it was the best you ever had. This continues to this day. No matter what happens, the two of you are quite happy together.

[13] For overviews see, for example, Kövecses (2002) and Gibbs (2008); see also Górska (2008).

Story B
Imagine that you are a single person. A friend sets you up on a blind date. You really like this person and start dating a lot. Your relationship was moving along in a good direction. But then you encountered some difficulties. The relationship did not feel the same as before. This lasted for some time. No matter how hard you two tried, the two of you were not getting along.

Next, the participants answered a series of questions which were designed to test their intuitions about the relationships in the two stories and the implicit image schema of SOURCE – PATH – GOAL that underlies the source domain of the LOVE RELATIONSHIPS ARE JOURNEYS metaphor. The questions are listed in (17) below:

17) (i) Which relationship progressed further?
(ii) Which relationship was progressing faster at the beginning?
(iii) Which relationship is progressing faster at present?
(iv) Which relationship progressed more along a straight line?
(v) In which relationship were the individuals heading in the same direction?

Similarly to Gibbs's (2005) study, there was a lot of regularity in the students' answers: in the case of the first question 96% of participants selected Story A (the "smooth journey" story, as Gibbs refers to it). Answers to the second question were divided into 51% choices of Story A and 49% – of Story B (in Gibbs's terms: the "interrupted journey" story). For the third question, 77,5% of participants chose the smooth journey story. The same story was also selected in the case of the fourth and the fifth question by, respectively, 90% and 88% of participants. These results are very much in line with the findings reported in Gibbs (2005: 128-129)), wherein the smooth journey story was selected as the answer to the first and the third question by 90% of the participants, and to forth and the fifth questions by 60% and 80% respectively, while the second question, just as in my study, resulted in a split with 45% selecting the smooth journey and 55% the interrupted journey.[14] Observe that the very close match between Gibbs's findings based on his study of native speakers of English and the results of my pilot study where the participants were native speakers of Polish

[14] The greatest discrepancy is in the number of participants who selected the smooth journey story as their answer to Question (iv) (cf. 60% in Gibbs's study and 90% in my study). This difference seems to suggest that for the Polish participants a romantic relationship is very likely to succeed if there are no obstacles on its way so that nothing prolongs its smooth development (i.e. when it may proceed along a straight line), and in the case of American participants this factor has a much lower effect.

who are very fluent in English does not seem coincidental. On the contrary, it suggests that English and Polish participants drew inferences on the basis of an analogous pattern of metaphorical thought. This comes as no surprise, since speakers of these two languages systematically talk about LOVE in terms various aspects of JOURNEY. Needless to say, the universal image schema of SOURCE – PATH – GOAL provides experiential grounding for this conceptual metaphor irrespective of the language we speak.

In Part 2 of my study, students were first instructed to read the two stories again and find expressions which explicitly tell something about: (i) the distance of the journey travelled; (ii) its speed; (iii) the shape of the path; and (iv) the direction of motion of the travellers. As predicted, no such expressions were found. Next, students were asked to reread the questions (see (17)) and decide whether any of them ask about these four aspects of the journey. This time students had no problem with finding positive answers: they had no doubts that question (i) is about the distance of the journey travelled, question (ii) and (iii) – about the speed, question (iv) – about the shape of the path, and question (v) - the direction of motion of the travellers. Finally, students were instructed to read the two stories once more and find whether there are any expressions which explicitly describe *relationships* as being like a journey. As expected, they could find only one such expression, namely:

18) *Your relationship was moving along in a good direction*.

The final and, for my purpose, the main part of my study resided in an open discussion of the results of Part 1 and Part 2 of the experiment. My aim here was to find how the students would account for the situation of discrepancy between the explicit linguistic coding and their detailed understanding of the narratives, and the way the students drew inferences in particular. It is most interesting to note that, having realized that there is hardly any linguistic support in the text of the narratives for their detailed answers, some students were so much taken aback that they kept rereading the stories again and again! They accepted the results as "real", rather than a trick of some sort, only when they had learnt about the results of the original study by Gibbs. Clearly, in our folk view of language we so much believe in meaning being contained "right there" in the words themselves (see Reddy 1979) that we feel very uncomfortable to find that there is some implicit mechanism of meaning construction, such as the conceptual metaphor, to which we have no direct access. In brief, we do not feel at ease with our *cognitive unconscious* even when we have strong evidence for the role it plays in our metaphorical reasoning.[15]

[15] The term *cognitive unconscious* is after Lakoff – Johnson (1999).

And as for the students' attempted accounts of the results of Part 1 of the study, even though the majority did not want to take a risk, a few provided explanations, such as: "something hidden must be going on" and "this is how we normally think about love". In these explanations we can see that some implicit conventional pattern of metaphorical thought, residing in understanding of the conceptual domain of LOVE RELATIONSHIPS in terms of the JOURNEY domain, has emerged from the cognitive unconscious.

3.2. Simulation semantics

Simulation semantics is a new line of psycholinguistic research which has been inspired by recent studies in cognitive science showing that many aspects of perception are coupled with action (see Gibbs 2005: 118). Crucially, it has been claimed in cognitive literature that "[a] significant part of how we understand the behavior of others is accomplished through real and *simulated body actions*", which in Damasio's (1999, 2003) terms are "as-if-body loops" (Gibbs 2005: 118, emphasis mine). Relying on these findings, simulation semantics "gives a primary role to embodied simulations in drawing inferences from various metaphorical and nonmetaphorical language" (see Gibbs – Perlman 2006: 218, and the literature cited therein). This perspective has been also adopted by Gibbs (2005) in his approach to image schemas and, in effect, to his idea that embodied simulations are involved in understanding metaphorical language which is based on image schematic reasoning.

To be more precise, according to Gibbs, "image schematic reasoning is always being recreated by the body as people continue to engage in sensorimotor behaviors related to [e.g.] BALANCE, RESISTENCE, SOURCE-PATH-GOAL" (2005: 116). By claiming that image schemas are psychologically real he means, therefore, that they play "a critical role in people's real-time thought and linguistic processes" (2005: 114). This view, as Gibbs (2005) and Gibbs – Perlman (2006) argue, has gained support from various experimental studies into the embodied metaphor understanding. For the sake of illustration, let me refer to one such study by Gibbs (in press), which is discussed in Gibbs – Perlman (2006: 224-225).[16] The study aimed to test the hypothesis that, when engaged in understanding of simple narratives which involve conceptual metaphors (e.g. LOVE RELATIONSHIPS ARE JOURNEYS), people imaginatively simulate themselves into a bodily action (such as motion along some path), which facilitates their metaphorical understanding of a certain aspect of the abstract target concept (e.g. the

[16] An earlier version of this study is also discussed in Gibbs (2005: 129-130); for more on the role of simulation (i.e. re-enactment of perceptual, motor and introspective states acquired during experience with the world, body and mind) in cognition see Barsalou (2008, 2009).

idea that love relationships can move along a path toward a goal). The hypothesis was tested on the basis of the stories given here in (16) in section 3.1. above and their nonmetaphorical counterparts (i.e. without the statement *Your relationship was moving in a good direction*) in two experimental conditions. In one condition, after hearing either the successful smooth journey story or the unsuccessful interrupted journey story in either the metaphorical or in the nonmetaphorical version, participants were asked to *physically walk* towards an object (a yellow ball), 40 feet away. In the other experimental condition, participants were instructed to *imagine walking* to the object after hearing one of the stories and press a stopwatch as soon as they imagined arriving at the object. As for the first physical walking condition, analyses of the walking times as well as of the length of walking showed that there was a significant difference in how each of the metaphorical stories was physically enacted: walking times were generally longer for the successful story, and so were the distances covered. Similar results were obtained for the imagined walking condition. This, according to Gibbs – Perlman, suggests that metaphorical understanding of narratives which was prompted by the metaphorical linguistic expression – *Your relationship was moving in a good direction* – "is not purely abstract, but embodied" in that aspects of manner and path of movement in a particular relationship as they were conceived by the participants subsequently affected the manner and path of the participants' actual walking as well as their imagined walking as they thought about the stories in the experimental condition (see 2006: 225). In a word, metaphor understanding appears to be an embodied simulation process.

3.3. Concluding remarks

On the basis of psycholinguistic data claims have been made that what cognitive linguists describe as conventional metaphorical expressions speakers/listeners often regarded as literal speech. For example, according to Keysar et al. (2000), "expressions like *He was depressed* are entirely literal, and are not motivated by a conceptual metaphor such as SAD IS DOWN" (Gibbs – Perlman 2006: 215). Arguments of this kind, however, do not take into account the fact that with repeated use semantic structures, whether metaphorical or otherwise, gain the status of cognitive routines which speakers activate fully automatically. In effect, in the case of well-entrenched metaphorical extensions, reliance on the categorizing relationship holding between a particular extended sense and some other more basic sense is no longer necessary (see Langacker 1987: 58, 68-69). Note also that the "fading away" of the metaphor, or, in other words, the loss of motivation can be regarded as "a special case of the gradual decrease in analyzability that is typical for lexical items" (Langacker 2008: 224, fn. 11). Clearly, this dynamic aspect of language has an obvious implication for empirical stud-

ies of metaphorical expressions – variation in speakers judgments is to be expected as it is a direct reflection of the development of meanings in language on the one hand, and of nature of language as a repository of symbolic resources which are mastered as cognitive routines on the other hand.

4. Speakers' and listeners' conscious awareness, and music

In this section I will aim to show that speakers and listeners may have clear intuitions about the conceptual nature of metaphor and, crucially, they may discuss explicitly the function of a particular novel metaphor in understanding and in action. The case in point is the novel conceptual metaphor LIFE IS MUSIC, which was created by conductor and pianist Daniel Barenboim; the metaphor formed the backbone of a series of five lectures titled *In the beginning was sound* which were delivered by Barenboim as the *BBC Reith lectures* of 2006. Barenboim's explicitly stated aim was to convince his audience that music (classical music and jazz in particular), which he characterizes as "sound with thought" (LD-1), can express not only our feelings and emotions, but may also serve as a powerful tool of thought and communication.

Within the framework of conceptual metaphor, LIFE IS MUSIC can be regarded as a megametaphor which extends through the whole lecture series, whose function is to unify a number of specific metaphors having an individual, social, political or cultural aspect of LIFE as their target domains. Consider, for instance, how Barenboim proceeds to convince his audience that the impact of a single critical event in life on our perception of whatever preceded it and whatever will follow is best expressed and understood through music. Referring to a musical example he later intends to play, he first notes:

19) the moment where there comes a *fantastic vertical pressure on the horizontal floor of the music*, and that that moment you know that the music cannot continue any more the way it was before, such as the world was not the same after the 9th November of 1938, or the 9th November of 1989, or the 11th September of 2001 – events that have changed everything both towards the future and towards the past (L3).

The specific novel metaphor that he employs can be stated as: A CRITICAL EVENT (IN THE COURSE OF LIFE) IS A VERTICAL PRESSURE (ON THE HORIZONTAL FLOOR OF MUSIC). The musical example played to support the argument are a few bars from the last movement of the ninth symphony by Beethoven where the text is: "And the cherub stat for Gott, for Gott, for Gott". Observe that the UP/DOWN and the FORCE image schemas, which provide the structure and basic "logic" of the source domain of this metaphor, are evoked first through lan-

guage (see the expressions *vertical pressure*, *horizontal floor* in (19)), and then by means of pitch and volume of the music played. It is thus evident that, with the help of the conceptual metaphor in question, Barenboim and his audience simultaneously participate in two modes of thought and communication: music and language.

As one more illustration, [17] consider how Barenboim reconstructs for his audience the way he managed to find a resolution in his debate with his friend Edward Said over the Oslo process. He notes first that for a long time they kept having very hefty arguments until one day Barenboim said to his friend:

20) It doesn't really matter if Oslo is right or wrong, it will never work because the relation between content and time is erroneous." I said, "This I have learned from music." And he looked at me and said, "What are you talking about?" And I said to him, *"The preparation for the beginning of the Oslo discussions was practically non-existent, much too quick. And the process itself, once the discussion started, was very slow, and then it was interrupted, and then they said they would meet next Tuesday, and then it was cancelled on Monday, and then they met again a month later, and everything. It had no chance."* And I sat down at the piano and I showed to him what I meant (LD-1).

At this point, Barenboim played a few bars of a very majestic, slow introduction of the *Pathetique sonata* of Beethoven, and then moved on to play a few bars of the main movement – *Allegro*, and recalled that he had told his friend that "Oslo, the equivalent of Oslo would be if I would play the introduction very fast and without any preparation of anything – in other words:" [he played a few bars of the introduction very fast], and commented: "*You would not understand anything what I am doing*. And then I would get to the main allegro and I will play:" [he played only one note from the allegro], which made his audience respond with laughter; he then he played a few more notes of the allegro – few at a time with pauses, to which his audience reacted with applause. Finally, he closed up his argument by saying that his discussion with his friend Said "stopped from that moment on about Oslo because we both agreed it wouldn't work, for different reasons" (LD-1).

In this case, the specific novel metaphor which Barenboim employs can be stated as: A SUCCESSFUL EVENT SCHEDULE IS AN APPROPRIATE RELATION BETWEEN CONTENT AND TIME IN MUSIC. At the linguistic level, this metaphor extends over the paragraph in (20), providing understanding of why the timing of the events as Barenboim has described it could not lead to a successful outcome

[17] See also Górska (forthcoming).

of the Oslo process (see the passage in bold in (20)). And, here again, Barenboim's musical example is meant to support his verbal message and shift his audience to a different mode of thought and communication – music. Note also that Barenboim explicitly observes that his audience "wouldn't understand anything", if the relation between content and time in the introduction of the *Pathetique sonata* was of the type he played in its very fast version. Observe further that Barenboim's communication via the musical mode is crystal clear to his audience – they react with laughter and applause.[18] Evidently, both for Barenboim and his audience the presently considered specific instantiation of the metaphor LIFE IS MUSIC is a mode of thought which provides a clear understanding of the situation at hand, and also functions as a successful means of communication. It needs to be emphasized, however, that when Barenboim originally employed the same specific metaphor in his debate with Edward Said, it played a role not only in providing an understanding of the situation to which they both could agree (although "for different reasons"), but – more importantly – it brought about a change in their action and behaviour – they stopped arguing.

To sum up, in certain types of discourse, such as lectures, speakers and hearers may openly get involved in a creative metaphorical thought and reasoning, being consciously aware of a particular novel metaphor and relying on it in constructing arguments and in achieving their persuasive aims. Moreover, the data discussed in this section show that we have yet another kind of convergent evidence for the conceptual nature of metaphor – from language and music.[19]

5. Conclusion

Beyond doubt, cognitive work based on metaphorical linguistic expressions has opened up the study of language to new areas of research. Most importantly, it paved the way to studies of experiential and cultural motivation for patterns of metaphorical thought, thereby establishing a close link of linguistics with two other disciplines – cognitive psychology and anthropology. Its undeniable success and its contribution to the linguistic field notwithstanding, the cognitive theory of metaphor has not confronted various criticisms it has been subject to with sufficient care and attention.

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[18] An inquisitive reader is invited to visit the *BBC Reith lectures* archives (see the Data sources below). It is highly likely that Barenboim's musical "argument" would bring about a similar reaction of the reader.

[19] For a recent overview of research on metaphor and music see Zbikowski 2008 and the literature cited therein. For the present purpose, suffice it to observe that, so far, the research has concentrated on three issues: (i) metaphorical language *about* music; (ii) metaphor *in* the "language" of music, and of music theory in particular; (iii) the correlation between text and accompanying music (as in songs).

Seen in this light, this paper was meant to resume the discussion of the conceptual nature of metaphor. Its main aim was to show that there is a great diversity of linguistic evidence for patterns of metaphorical thought. This diversity, however, even though it speaks very strongly for the idea that metaphor is conceptual in nature, is not sufficient to justify it. Therefore, recognizing the fact that claims about our conceptual system which are based on linguistic analyses alone remain within the "language – thought – language" circle, the paper discussed also some kinds of nonlinguistic evidence for conceptual metaphors. Psycholinguistic research on metaphorical reasoning has been one major source of such nonlinguistic verifications. As I tried to show on the basis of a sample of my study of the LIFE IS MUSIC metaphor, convergent evidence from language and music, may also serve to break open the "language – thought – language" circle.

To close up, let me put linguistic debates aside and, returning to the *motto* to this paper, give its original context provided by Langacker, who says:

Metaphorical thinking being unavoidable, we might as well relax and enjoy it. It is more helpful than harmful so long as we are aware that it is in fact metaphorical and are cognizant of its limitations. Ideally, it should be used to build up an apprehension of the target phenomenon which stands independently of any particular metaphor employed. Still any metaphor is misleading to some extent (2006: 108).

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LD- Discussion after L1.

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