

Cyclic vs. circular argumentation in the Conceptual Metaphor Theory

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Abstract

In current debates Lakoff and Johnson's Conceptual Metaphor Theory has been charged with the circularity of the relation between the data and the hypotheses. If these charges were justified, they would be fatal for Conceptual Metaphor Theory, because circularity is one of the most serious objections that can be raised against a scientific approach. Accordingly, the paper addresses the following problems: (1) Are the charges claiming that Lakoff and Johnson's Conceptual Metaphor Theory is circular adequate? (2) In what kind of metatheoretical framework can it be decided whether a given argumentation is circular? (3) Is Lakoff and Johnson's Conceptual Metaphor Theory built on circular argumentation? The paper answers these questions as follows: (1) The charges mentioned are not adequate because they are based on defective notions of circularity. (2) An approach to plausible argumentation is proposed. It includes a novel account of fallacies, which facilitates a more adequate definition of circularity than those which the charges use. (3) This novel account yields the result that Lakoff and Johnson's (1980) and Lakoff's (1993) argumentation is cyclic rather than circular, but the way it treats data includes circular aspects as well.

Keywords: metaphor, argumentation, fallacies, circularity

1. Introduction

Since Aristotle, besides inconsistency, circularity has been the most serious objection that can be raised against a scientific theory. Therefore, it is remarkable that present-day schools of metaphor research mutually accuse each other of circularity (cf. Glucksberg 2001, 2003, Murphy 1996, Ritchie 2003, Gentner and Bowdle 2001, Haser 2005, McGlone 2001).

Tackling the issue of what criteria charges of circularity are based on in cognitive metaphor research, whether these criteria are adequate and whether the approaches under accusation are indeed circular, seems to be well-motivated – even inevitable – for at least three reasons. First, charges of circularity are in most cases extremely powerful. Second, as for example Gibbs and Perlman (2006: 215) remark, criticism based on the alleged circularity of the linguistic theory at issue is present not only in metaphor research but in cognitive linguistics in general and even in generative grammar. Third, the charges are characterised by the fact that the authors putting them forward talk about circularity in different senses.¹ Accordingly, exploring the characteristics of circular argumentation concerns *the methodological foundations of cognitive linguistics*. It is therefore a task of utmost significance and should be of general interest.

As the 1980 version of Lakoff and Johnson's Conceptual Metaphor Theory is – besides being one of the most popular approaches to cognitive semantics – highly controversial, it

readily lends itself to an instructive illustration of methodological problems. Therefore, in the present paper we will restrict our considerations to this approach which, accordingly, serves as an instructive example of *how* in cognitive linguistics a given approach has been charged with circularity and *what insights* one may gain once the charges have been subjected to a thorough methodological analysis.

Thus, the following problem will be raised:

(P1) Are the charges claiming that Lakoff and Johnson's Conceptual Metaphor Theory is circular adequate?

We will see that the answer to (P1) is *no*, because the adequacy of the criteria presupposed by the charges is disputable. Therefore, the charges can be evaluated only if there is a workable *metatheoretical framework* at our disposal which is suitable for exploring the structure of circular argumentation. For this reason (P2) needs to be investigated:

(P2) In what kind of metatheoretical framework can it be decided whether a given argumentation is circular?

The metatheoretical framework which our solution to (P2) will suggest is expected to enable us to raise and answer (P3) as well:

(P3) Is Lakoff and Johnson's Conceptual Metaphor Theory built on circular argumentation?

In accordance with the problems thus raised, our train of thought will be the following:

First step: in Section 2 our starting point will be three well-known criticisms charging Lakoff and Johnson's Conceptual Metaphor Theory with circularity put forward in Haser (2005) and McGlone (2001). Nevertheless, before we can raise (P1), we first have to reconstruct the criteria of circularity the critics use, because they do not explicate but merely tacitly presuppose them.

Second step: after having reconstructed the latent criteria presupposed by the three charges at issue, in Section 3 we will tackle (P1) and examine whether the reconstructed criteria of circularity are acceptable.

Third step: in Section 4 we will outline our own approach to circular argumentation which may serve as a possible solution to (P2).

Fourth step: in Section 5 we will obtain the solution to (P3) by applying our approach to Lakoff and Johnson's theory.

Fifth step: finally, in Section 6 our findings will be summarized, generalized and evaluated with respect to the improvement of cognitive linguistics research.

2. Reconstructing the charges of circularity against Lakoff and Johnson's theory

2.1. Rhetorical circularity

The first charge asserts that *the way* Lakoff and Johnson *present* the main hypothesis of their theory is circular. Haser (2005: 145–146) quotes the following passage:

(1) “Try to imagine a culture where **arguments are not viewed in terms of war**, where no one wins ..., where there is no sense of attacking ... Imagine a culture where an **argument is viewed as a dance**, the participants are seen as performers, and the goal

is to perform in a balanced ... way. In such a culture, people would **view arguments differently**, *experience them differently, carry them out differently, and talk about them differently.*” (Lakoff and Johnson 1980: 5; bold emphasis as in the original, italics added)

Though Haser does not use the expression ‘circularity’, she clearly claims that (1) is circular from two different but closely related points of view. She considers the argumentation presented by the authors to be fallacious because the conclusion either merely repeats the premise (cf. (2)), or does not add any substantial information to it (see (3)):

- (2) “The conclusion of this argument is launched by an observation which *merely repeats the premise*. Lakoff/Johnson *presuppose what they should be arguing for*. Their premise (‘imagine a culture ...’) can be spelt out as follows: Suppose that people in a certain culture view arguments in a different way than we do (i.e., not in terms of war, but in terms of a dance). Their conclusion says that in such a culture, people would ‘view arguments differently’ (Lakoff/Johnson 1980: 5).” (Haser 2005: 146; emphasis added)
- (3) “The sentence we have interpreted as a first ‘conclusion’ from Lakoff/Johnson’s premise *does indeed have this status according to the logic of Lakoff/Johnson’s exposition*. This emerges from Lakoff/Johnson’s subsequent observation, which *is little more than yet another repetition of the preceding contention* that people in such a culture would ‘view arguments differently’: People in that culture would also ‘experience’ arguments in a different way. If we grant the validity of Lakoff/Johnson’s presuppositions [...] *the conclusion in question follows as a matter of course* (‘In such a culture, people would ... carry ... out [arguments] differently’).” (Haser 2005: 146; emphasis added)

Thus, the criterion of circularity she tacitly presupposes can be reconstructed as follows:

- (4) The conclusion is the same or is equivalent to some part of the premises.

Since only in the case of *inferences* can one talk about premises and a conclusion, (4) suggests that it is the inferences applied by Lakoff and Johnson that are considered to be circular.

Moreover, she thinks that the circularity of the passage in (1) functions as a *rhetorical trick*, applied to convince the reader (cf. Haser 2005: 147).

2.2. *The circularity of the relation between metaphorical expressions and metaphorical concepts*

McGlone approaches the problem in a different way. He does not consider Lakoff and Johnson’s rhetoric, but the *relation between the data and the hypotheses*, to be circular:

- (5) “[...] Lakoff’s claim that metaphors transcend their linguistic manifestations to influence conceptual structure rests solely on these manifestations. How do we know that people think of theories in terms of buildings? Because people often talk about theories using building-related expressions. Why do people often talk about theories using building-related expressions? Because people think about theories in terms of buildings. Clearly, the conceptual metaphor view must go beyond *circular reasoning*

of this sort and seek evidence that is independent of the linguistic evidence.” (McGlone 2001: 95; emphasis added)

According to McGlone’s criticism, Lakoff and Johnson obtain one of the hypotheses of the theory (the existence of metaphorical concepts) from the data (metaphorical expressions), and then vice versa, they obtain the data from the hypothesis in question. The following criterion of circularity can be reconstructed from (5):

(6) We know that the conclusion is true since we know that the premise is true; but the premise is true since the conclusion is true.

(6), just like (4), applies the definition of circularity to *inferences*, since McGlone reduces a sequence of Lakoff’s argumentation to the relation between two statements claiming that they mutually presuppose each other.

2.3. *The circularity of the relation between metaphorical concepts and the experiential basis*

Haser claims that the relation between metaphorical concepts and the experiential basis is also circular:

(7) “If metaphors contribute to our understanding of abstract concepts precisely what is contained in their experiential basis, the experience *gained* by metaphorical concepts (cf. Lakoff/Johnson 1980: 3; 15) proves to be the very experience already *presupposed* (according to Lakoff/Johnson 1980: 19) for understanding them.” (Haser 2005: 156; emphasis as in the original)

One of Lakoff and Johnson’s central hypotheses states that it is metaphorical concepts that allow us to conceptualise the target domain with the help of the source domain:

(8) “Following Lakoff/Johnson (1980: 81), we can conceive of a conversation as an argument only if we are capable of mapping part of the concept of *war* onto the concept of *conversation*. In sharp contrast to the statement from Lakoff/Johnson (1980: 61), the claim advanced here entails that we need the very metaphor ARGUMENT IS WAR to even so much as understand the concept *argument* [...]” (Haser 2005: 157; emphasis as in the original)

At the same time, Lakoff and Johnson build the processing of metaphorical expressions, i.e. the working mechanism of metaphorical concepts, upon an experiential basis which, in turn, is based on the relation between the source domain and the target domain. However, this presupposes a relation which is the reverse of the previous one:

(9) “Lakoff/Johnson (1980: 61) seem to imply that a structural metaphor like ARGUMENT IS WAR is based on the experience that arguments exhibit many features typically associated with warfare: The authors note that ‘structural metaphors are grounded in systematic correlations within our experience’. This in turn presupposes an antecedent conception of what arguments are, otherwise the purported ability to experience ‘correlations’ between the two domains appears wholly mysterious.” (Haser 2005: 157)

The criterion of circularity applied by Haser in (7)–(9) can be reconstructed as follows:

- (10) In order to solve a given problem we have to solve another; however the latter presupposes the solution to the former.

Namely, understanding abstract concepts is not possible without metaphorical concepts. But metaphorical concepts are based on a systematic correlation between the abstract target domain and a more concrete source domain. From this it follows that representations of both conceptual domains are needed. However, the target domain does not have a separate representation; it can be conceptualised only with the help of the source domain. In turn, the conceptualisation can be based only on the metaphorical relation between the two conceptual domains – and so on. From this Haser (2005: 156) concludes that Lakoff and Johnson’s *theory* becomes circular.

3. (P1): Are the charges of circularity adequate?

3.1. *Rhetorical circularity*

In (2) and (3) Haser reproaches Lakoff and Johnson claiming that in (1) the first sentence of the conclusion merely repeats the premise, while further parts of the conclusion are simply made up of trivial consequences of this statement, which do not add any substantial information to it. The premise is the following:

- (11) “Try to imagine a culture where arguments are not viewed in terms of war [...]. Imagine a culture where an argument is viewed as a dance [...].”

The first sentence of the conclusion is given below:

- (12) “In such a culture, people would view arguments differently [...].”

The conclusion goes on as follows:

- (13) “[...] experience them differently, carry them out differently, and talk about them differently.” (Lakoff and Johnson 1980: 5)

Undoubtedly, Lakoff and Johnson’s phrasing might be misleading, because it can easily be interpreted in such a way that it suggests that they use the rhetorical tool of repetition simply to persuade the reader. However, we must say that Haser is mistaken in her judgement of (1) for the following reasons.

Haser’s first mistake consists in detaching (12) from (13). Namely, these two statements make up the conclusion *together*. Second, Haser interprets (1) without taking into consideration its context. Taking into account a wider context it can be shown that, on the one hand, (12) is not a simple paraphrase of (11), and, on the other hand, (13) – i.e. the second part of the conclusion – is not a repetition of (12), the first sentence of the conclusion.

Lakoff and Johnson (1980: 3) state that they do not simply consider the conceptual system as a part of thinking; rather, they take it to be a system behind thinking, acting, experience, perception and language, which provides each of these with a structure in the same way. Since the conceptual system is not directly accessible, we can infer its characteristics from various properties of language, thinking, behaviour, etc. (cf. Lakoff and Johnson 1980: 3–4). Now we

can say that (11) applies to the conceptual system and it captures a situation in which the metaphorical concept ARGUMENT IS WAR is not part of the conceptual system, but the latter contains the metaphor ARGUMENT IS DANCE. According to Lakoff (1993: 206), this means that (1) takes as its starting point the assumption that there is a culture where the conceptual system contains a “mapping (in the mathematical sense)” from the conceptual domain DANCE to the conceptual domain ARGUMENT, but where there is no such connection between the domains WAR and ARGUMENT. (12) formulates one of the consequences of (11): if (11) holds, then people will not think as if arguments were wars. That is, the kind of systematicity that should derive from the presence of the metaphorical concept ARGUMENT IS WAR will not be found in their thinking. Thus, for instance, they will not infer conclusions indicating that they conceptualise arguments (at least partially) in terms of war; instead, they will infer conclusions which are possible because they conceptualise arguments as a dance.

From the context it also becomes evident that the information content of (13) *clearly and substantially exceeds* that of the starting hypothesis, in so far as it states a systematic connection among thinking, experience, action and certain aspects of language:

- (14) “This is an example of what it means for a metaphorical concept, namely, ARGUMENT IS WAR, to structure (at least in part) what we do and how we understand what we are doing when we argue. [...] ARGUMENT is partially structured, understood, performed, and talked about in terms of WAR. *The concept is metaphorically structured, the activity is metaphorically structured, and, consequently, the language is metaphorically structured.*” (Lakoff and Johnson 1980: 5; emphasis added)

(14) makes it clear that the constituent sentences of the last sentence of (1) – i.e. (12) and (13) taken together – do not repeat the first constituent sentence of (1). As opposed to this, on the basis of a statement which serves as the starting point and which elaborates on a given property of the conceptual system, the constituent sentences predict certain characteristics of thinking, action and language. Accordingly, (1) claims that if a certain metaphorical concept is present in the conceptual system (i.e. one conceptual domain is partially conceptualised with the help of another conceptual domain), then the same kind of systematicity can be detected in our thinking, experience, action and speech (cf. Lakoff and Johnson 1980: 7, Lakoff 1993: 210). This also means that (11), unlike (12) and (13), is located on *a different epistemological level*: (11) states a hypothesis about the conceptual system, while (12) and (13) specify those consequences of this hypothesis that can be checked on the basis of our experience. For that reason, the argumentation *does not* return to its starting point, but leads instead to a statement that asserts much more than the initial hypothesis.

The reason Haser’s charge could be objected to is that examining one passage may be sufficient to detect circular *formulation*, but it is not sufficient to point out the existence of circular *argumentation*. In the case of the latter, one has to interpret and evaluate the arguments presented above with respect to an appropriately wide *context*. However, it is obvious that (4) is not a sufficient metatheoretical tool for this. Thus, the question of whether in the context of the whole theory the relationship between data capturing different manifestations of human behaviour and the hypotheses about the structure and functioning of the conceptual system is circular or not, cannot be decided on this basis and needs further clarification.

3.2. *The circularity of the relation between metaphorical expressions and metaphorical concepts*

The two directions of argumentation mentioned by McGlone are not simply the reversals of each other. Rather, they represent two fundamentally different perspectives. Namely, from a *methodological* point of view metaphorical expressions work as data that serve as the starting point for linguistic theorising in agreement with the view according to which in cognitive linguistics “one can move freely and gradually from facts about language to facts about human cognition and further on to facts about human life generally” (Harder 1999: 196). Therefore, methodologically metaphorical expressions are indeed primary relative to metaphorical concepts.

However, it is an ontological assumption that metaphorical expressions are manifestations of metaphorical concepts. Accordingly, from an *ontological* point of view it is metaphorical concepts which must be considered as primary because they are responsible for the behaviour of the linguistic expressions (cf. Kertész 2004, Kertész and Rákosi 2005a).

Consequently, the two chains of inferences leading in opposite directions constitute two different perspectives rather than turn the argumentation into a full circle.

Now it is easy to understand why McGlone considers something to be circular which is not necessarily circular. The answer is the same as in Haser’s case: the criterion of circularity he presupposes is not adequate. It does not allow for a judgement on the acceptability of an argumentation process which contains arguments that go in opposite directions and represent two different perspectives.

3.3. *The circularity of the relation between metaphorical concepts and the experiential basis*

Haser’s criticism given in (7)–(9) above does not take into consideration the thesis of the partiality of metaphorical structuring (see e.g. Lakoff and Johnson 1980: 12–13). On the basis of this hypothesis, we may say that the views presented in (8) and (9) are not incompatible. Namely, if the target domain of metaphors is partial, and only the core of the concept is given for us primarily, then it holds that, for instance, the concept of ARGUMENT has its own, though incomplete, representation, and it is also true that a complete representation of the concept in question (i.e. filling in the gaps of the partial representation) can only be achieved via metaphorical concepts (see Lakoff and Johnson 1980: 81, 118). Accordingly, since argument is a kind of conversation, the concept of ARGUMENT has its own, specific representation; however, it does not have an elaborated structure. Nevertheless, it has typical characteristics revealing a kind of systematicity. The very same systematicity can be found in the concept of WAR, in linguistic expressions related to arguments as well as in our behaviour in the course of argumentation. Hence, it provides a culturally determined experiential basis for us, which becomes part of the meaning of the concept corresponding to the target domain (cf. Lakoff and Johnson 1980: 63–64). Contrary to Haser’s opinion, one does not have to presuppose a “full-fledged conception” (cf. Haser 2005: 156) for all this. To perceive similarities between two experiential domains we do not need complete representations of the concepts in question. On the contrary, the possibility of applying a metaphorical concept arises only when the concepts are asymmetric in this respect, i.e. one of them is more complex than the other. This, in turn, means that we can only partially solve the task of mental representation. However, this is sufficient to apply the metaphorical concept, since the similarity of structures ensures the necessary basis to establish a unidirectional mapping between the two domains. As a result of this mapping, new elements are added to the representation of the target domain, and accordingly, the similarity between the two conceptual domains increases. From this we have to conclude that this part of Lakoff and Johnson’s theory is not circular in the sense of (10).

3.4. *The solution to (P1)*

From the considerations above we obtain the following solution to (P1):

(H1) The charges put forward by McGlone and Haser are inadequate since they are based on untenable criteria of circularity.

So far we have only shown that Haser's and McGlone's charges are not acceptable on the basis of the criteria they have tacitly assumed. However, it *does not* necessarily follow from this that Lakoff and Johnson's theory is not circular. Therefore, in order to solve (P2), in Section 4 we have to outline a metatheoretical framework which is suitable for deciding whether the versions of Lakoff and Johnson's Conceptual Metaphor Theory in question are circular or not.

4. **(P2): An argumentation theoretic approach to circularity**

4.1. *Plausible argumentation*

The basic idea of the approach we will apply to solve (P2) is that the structure of linguistic theories is inseparable from the argumentative process of the raising and solving of problems, which is based on various techniques of *plausible argumentation*. Our approach has been motivated by the ideas of George Polya and Nicholas Rescher (cf. e.g. Polya 1948, 1954; Rescher 1976, 1987) and was put forward e.g. in Kertész and Rákosi (2005a, b, 2006, 2009). Its central notions may be summarised as follows.

(i) *Plausible statements*. In most cases our hypotheses are not truths whose certainty can be secured by experience or by other hypotheses. Rather, they are more or less *plausible* statements: we are ready to accept them to some extent on the basis of *sources* that support them. Such sources are, for example, sense perception, use of special tools, methods, procedures, corpora, events, theories, our memory, conjectures, presumptions, certain methodological principles (e.g. simplicity, uniformity etc.), experts, witnesses, historical documents, or even inferences (cf. Rescher 1976: 6–7; Rescher 1973: 63–70, Kertész and Rákosi 2009). Plausibility is gradual and strongly source-dependent. A statement may be very plausible according to one source, and less plausible with respect to others, depending on the *reliability* of the sources at issue. It may also happen that some sources make the statement in question implausible by supporting another that is incompatible with it.

(ii) *Plausible inferences*. Deductive inferences the premises of which are true with certainty are capable of guaranteeing the truth of the conclusion. Thus, if the premises of an inference are true, and there is a logical consequence relation between them and the conclusion, then we are totally justified in accepting the conclusion. However, very often either there is no logical consequence relation between the premises and the conclusion or at least one of the premises is, instead of being certainly true, only plausible in the light of the given sources. Moreover, the combination of these two cases may also occur. Nevertheless, if we do not require the *certainty* of the conclusion (assured hypothetically or actually by the premises) but only its *plausibility*, then we can draw plausible inferences. Plausible inferences are capable of making their conclusion plausible – but not true – on the basis of the content and plausibility value of their premises. In such inferences the connection between the premises and the conclusion cannot be reduced to the relationship between their logical structures, as is the case with deductive inferences, but always rests on a *semantic relation*:

for example, causality, analogy, similarity, sign, necessary or sufficient condition, part-whole relation etc.

(iii) *The p-context.* From the above characterisation of plausible inferences it is clear that the relation between the premises and the conclusion cannot be reduced to their *formal* properties. Beyond their logical structure, we have to take into consideration all information that may be relevant for judging the plausibility value of the premises and the semantic relation between them and the conclusion. This motivates the introduction of the notion of the *p-context*, which will serve as the background against which plausible inferences can be created, used and evaluated. The p-context includes, first, a set of sources in terms of which the plausibility value of statements can be judged. Second, it covers a set of statements together with their relevant characteristics (in particular, their plausibility values with respect to the sources in the p-context, their logical and semantic structure). Third, the accepted methodological norms related to the components of the p-context (for instance, the permissible type(s) of inferences, the criteria of the acceptability of the statements, the methods of the resolution of inconsistencies, the criteria for judging the reliability of the sources etc.) also belong to the p-context.

(iv) *The p-context-dependency of plausible inferences.* Plausible inferences are in several respects p-context-dependent. First, the p-context facilitates only plausible inferences where the premises are plausible or true according to some sources in the p-context. In addition, plausible inferences have to be legitimate inference types in the given p-context. Second, if the p-context changes so that new sources become available which may influence the plausibility value of the premises (by making them more plausible or less plausible or even implausible), then the plausibility of the conclusion will change as well. Third, if there is no logical consequence relation between the premises and the conclusion, then the former are not sufficient to make the conclusion plausible. To secure the plausibility of the conclusion, latent background assumptions are needed (Rescher 1976: 60–70, Polya 1948: 223). These background assumptions have to fulfil certain logical and semantic criteria (see Kertész and Rákosi 2009), and they have to be true, plausible, or at least not known as implausible or false according to some source in the p-context.

(v) *The fallibility of plausible inferences.* Plausible inferences are fallible. First, at the outset their conclusion is not true with certainty but only plausible to some extent. Second, plausible inferences with latent background assumptions are especially liable to mislead because if one of the background assumptions is implausible or false in the given p-context, then the inference may be insufficient in establishing the plausibility of the conclusion even when the premises are true or plausible.

(vi) *The heuristic function of plausible inferences.* Plausible inferences are effective heuristic tools. First, although they are capable of giving only a partial support to the conclusion and are fallible, they can be applied in p-contexts in which inferences that could secure the truth of the conclusion are not available. Second, plausible inferences having latent background assumptions also provide new pieces of information not even implicitly included in the premises, because their conclusion goes beyond the information content of the latter (Polya 1948: 221; Rescher 1976: 60–70, 97–110). As opposed to this type of plausible inferences, the conclusion of inferences which are deductively valid cannot contain more information than the premises.

(vii) *The informational over- and underdetermination of the p-context.* In a p-context the sources may yield too much information in the sense that there is a statement which is made plausible by some source and its negation by another. In such cases, the p-context is informationally *overdetermined* and the set of the plausible statements in the p-context is *inconsistent* (Rescher 1976: 2, Rescher and Brandom 1980: 3–8). Nevertheless, the p-context may be informationally *underdetermined* as well (Rescher and Brandom 1980: 3–8). A typical

case of the informational underdetermination of the p-context is its *incompleteness*, insofar as there are statements which are neither plausible (in the extreme case: true with certainty) nor implausible (in the extreme case: false with certainty) with respect to any source given. A p-context may be simultaneously informationally under- and overdetermined.

(viii) *Problems, their solution and their resolution.* We call instances of informational over- or underdetermination *problems*. If a p-context is characterised by over- and/or underdetermination, then it is called *problematic*. In order to solve a problem, we have to re-evaluate the p-context. A *solution of a problem* is achieved if a p-context has been arrived at in which the statement in question is unanimously supported or opposed by the sources, that is, it is either plausible or implausible on the basis of *all* sources in the given p-context.

It is possible, however, that a problem has several solutions. This necessitates the introduction of the notion of the *resolution of a problem*. We resolve a problem if we find a solution of the given problem which is, when compared with other solutions, the best according to a set of criteria accepted and according to the information available to us. To achieve this, we need a *heuristic tool* that enables us to *re-evaluate the p-context* so that it leads or at least takes us closer to the resolution of the given problem in this sense.

(ix) *Plausible argumentation.* This heuristic tool is what we will call *plausible argumentation*. By plausible argumentation we mean the successive re-evaluation of a problematic p-context by the elaboration of possible solutions to its problems, the evaluation of the alternative solutions and the comparison of the latter. Its aim is the detection of all available solutions and the decision as to which of them is to be accepted as the resolution of the given problem. The process of plausible argumentation involves, among others, the following: (a) the *extension* of the p-context by new sources, new statements, new methods etc.; (b) the *coordination* of the extended p-context (for example, comparing the plausibility values of the statements stemming from the old and the new sources, collecting and summarizing information about the reliability of the sources, checking the consistency of the plausible statements etc.); (c) the *modification* of the extended and coordinated p-context; and (d) the *comparison* of the rival solutions.

(x) *Retrospective re-evaluation.* The above characterisation of plausible argumentation indicates that the argumentation process is basically *not linear*, because the re-evaluation of a problematic p-context usually does not lead immediately to an unproblematic one but may raise new problems. This may require the revision of previous decisions, the assessment of other alternatives etc. Therefore, throughout the argumentation process one returns to the problems at issue again and again, and re-evaluates the earlier decisions about the acceptance or rejection of statements, the reliability of the sources, the plausibility values of the statements, the workability of methodological norms, previously drawn inferences etc. In sum: one *retrospectively re-evaluates* the information at issue (cf. Rescher 1976, 1987).

(xi) *The cyclic and prismatic nature of plausible argumentation.* Retrospective re-evaluation is *cyclic* in nature. However, it is not only cyclic, it is also *prismatic*. This means that the cycles continuously change the perspective from which the pieces of information constituting the p-context are evaluated (cf. Rescher 1987).

4.2. *Circularity*

4.2.1. *Plausible versus fallacious argumentation*

Logical literature rooted in the Aristotelian tradition considers circularity as one of the *fallacies*. According to the *classical view*, “a fallacious argument, as almost every account from Aristotle onwards tells us, is one that *seems to be valid* but *is not so*” (Hamblin 1970: 12; emphasis as in the original). There is, however, widespread agreement among researchers

of contemporary argumentation theory that the classical view is untenable. The main reason for the current rejection of the classical view is that in many cases arguments that have been traditionally considered to be fallacious, are now seen as legitimate *plausible* (inductive, analogical, abductive, defeasible, presumptive etc.) *inferences* which are widely used both in everyday discourse and in scientific inquiry (cf. Woods and Walton 1989: 43–45, Kienpointner 1992: 249–250, Eemeren and Grootendorst 2004: 158, Walton 1995: 14–15, Walton 2001: 164, Woods 2004: XXV etc.). The inadequacy of the classical view is especially obvious in the case of circularity. For instance, on the one hand inferences of the form ‘A and B, therefore A’ or ‘A, therefore A’ are held to be fallacious according to each notion of circularity within the classical view of fallacies (for a brief overview see Woods and Walton 1989: 29–32). On the other hand, they are trivially valid deductive inferences and, accordingly, in the light of the classical view of fallacies, non-fallacious. Hence, according to the criteria of the classical view such inferences are simultaneously fallacious and non-fallacious.

Consequently, in order to solve (P2) and (P3), we have to give up the classical view of fallacies and that of circularity, too. Though there is a consensus about the unacceptability of the classical definitions in current literature, despite many attempts, no convincing suggestions have so far been put forward to formulate the criteria of fallaciousness. Thus, we have to seek a new starting point.

Against the background of our characterisation of plausible argumentation in Section 4.1, we will speak of a ‘fallacy’ if a particular stage of the argumentation process – and as a result, in certain cases even the whole process – cannot fulfil its function. Since the function of the argumentation process is problem solving, this means that fallacies prevent the latter from contributing to the resolution of the problem at issue. If the argumentation process can lead to an at least provisional resolution of the given problem, then we may term it *effective*; otherwise it is *ineffective*. Similarly, we call a *component* of the argumentation process *effective* if it contributes to the resolution of the given problem; otherwise it is *ineffective*. Thus we get:

- (15) *Fallacies* are ineffective components of the plausible argumentation process because they prevent a given stage or the whole of the argumentation process from fulfilling its heuristic function.

Fallacies may appear at any stage of the re-evaluation of the given p-context and may be triggered by any element of the argumentation process. It is often the case that they do not appear in isolation but are linked with other mistakes and tendentiously misguide the whole argumentation process. For example, the overestimation of the plausibility of the conclusion, the overvaluation of the reliability of a source, the preference of a less plausible statement against a more plausible one, the disregarding of relevant sources or statements, the insufficiency of the control of consistency, involving irrelevant information etc. are such mistakes.

Consequently, on the basis of what has been said above, it is obvious that plausible argumentation and fallacious argumentation cannot be distinguished primarily on the basis of structural criteria, but only *heuristically*. While plausible argumentation, when properly applied, is a means of gaining new and reliable information, fallacies may result in unfounded decisions and the defective solutions of problems.

4.2.2. *Cyclic versus circular argumentation*

From the above characterization of fallacies and on the basis of the considerations presented in Section 3, a possible explication of the notion of *circular* argumentation easily presents itself. With *cyclic* argumentation, “one indeed returns to ‘the same point’ but does so *at a different cognitive level*” (Rescher 1976: 119; emphasis added), since a modified, prismatically re-evaluated, qualitatively new information state is created (see also points (ix)–(xi) in Section 4.1 and Rescher 1987). Accordingly, cyclic argumentation is *effective*. As opposed to this, if the argumentation process returns to the start in such a way that it leaves it unchanged by failing to re-evaluate the p-context, then the argumentation has been deprived of its cyclic and prismatic nature, and is therefore *ineffective*. Thus, we can characterise circular argumentation as follows:

- (16) The argumentation process or a stage of it is *circular* if it contains fallacies in the sense of (15) that prevent this stage or the whole of the argumentation process from re-evaluating the p-context.

Circularity leads to an argumentation process which is bereft of its cyclic and prismatic nature. Certain typical fallacies triggering circular argumentation in scientific theorising are enumerated in (17):

- (17) (a) The argumentation process systematically ignores data that should be regarded as relevant, because their inclusion could significantly influence the plausibility of the hypotheses of the theory.
 (b) There exist data or hypotheses whose plausibility is unreasonably high, and because of this the theory neglects potential counterexamples.
 (c) Alternative hypotheses are not raised, or it is not shown that they are less plausible than the hypotheses preferred by the theory.
 (d) The argumentation process does not deliberately seek potential counterexamples and it does not systematically test its hypotheses.
 (e) The theory does not develop, it does not apply its means to new data or new problems; i.e. it does not try to expand its domain of application.
 (f) The applied methodology leaves relevant factors unclarified which could decrease the reliability of the results (data, hypotheses) stemming from them.
 (g) The theory contains statements which are plausible but which constitute an inconsistent set while no attempt is made at the resolution of this inconsistency.

Since linguistic theories are highly complex, in most cases it is not possible to decide at the outset whether the given theory corresponds to a cyclic and prismatic argumentation process or to a circular one. First, many theories are based on cyclic and prismatic argumentation which, however, may include circular stages as well. Second, the verdict on whether the theory as a whole is cyclic rather than circular or vice versa, cannot be based on the analysis of a single stage of its evolution, but must focus on the dynamism of its development. Therefore, to evaluate a theory in this respect, careful metatheoretical analyses are needed. Let us exemplify this in Section 5.

4.3. *The solution to (P2)*

What has been said in Sections 4.1 and 4.2, yields the following solution to (P2):

(H2) The approach to plausible argumentation outlined in Section 4.1 facilitates the definition of fallacies in (15) and that of circular argumentation in (16).

(H2) explicates the problem (P3) as follows:

(P3') Is the relation between the data and the hypotheses in Lakoff and Johnson's Conceptual Metaphor Theory based on *cyclic* (i.e. effective, prismatic, plausible) or *circular* (i.e. ineffective, non-prismatic, non-cyclic) argumentation in the sense of (H2)?

Now we set out to present our solution to (P3') by reconstructing the inferences which make up Lakoff and Johnson's argumentation.²

5. (P3): Cyclic vs. circular argumentation in Lakoff and Johnson's theory

5.1. The relation between metaphorical expressions and metaphorical concepts

5.1.1. Cyclic aspects of Lakoff and Johnson's argumentation

Haser's first charge and McGlone's criticism both find the relation between linguistic data (metaphorical expressions) and one of the central hypotheses of the theory (the thesis about the existence of metaphorical concepts) problematic. We are now in the position to examine whether circular argumentation can at this point be detected in Lakoff and Johnson's argumentation with the help of the notions we have just introduced.

We have seen in Section 3.2 that Lakoff and Johnson build up two chains of inferences leading in opposite directions. This strategy – if properly pursued – may facilitate the prismatic and cyclical re-evaluation of the p-context from two basically different perspectives, but it may also lead to circularity. In order to decide which is the case, we sketch the two chains of inferences.

In the *methodological cycles* they take as their starting point certain properties of data and, via plausible inferences, they obtain a series of plausible hypotheses as a *possible explanation* for the latter's behaviour (cf. for instance Lakoff and Johnson 1980: 3–4, Lakoff 1993: 206–210):

(18) Premises:

- (a) We systematically *talk* about arguments in terms of war.
- (b) If we systematically *talk* about arguments in terms of war, then the *language* we use to characterise arguments is partially structured by the concept of WAR.

Conclusion:

- (c) The *language* we use to characterise arguments is partially structured by the concept of WAR.

The first premise of the plausible inference above captures a property of *linguistic data* (there are many metaphorical expressions related to arguments), while the second premise sets up a possible *hypothesis* which establishes a relationship between this property and the conceptual system. In a similar manner they get (19) from the observation that our behaviour in the course of an argument has a lot in common with being at war (cf. for instance Lakoff and Johnson 1980: 4, Lakoff 1993: 206, 210):

(19) Our *behaviour* during argumentation is partially structured by the concept of WAR.

Moreover, the same can be said about our way of thinking (cf. for instance Lakoff and Johnson 1980: 4, Lakoff 1993: 206, 210):

(20) Our *reasoning* about arguments is partially structured by the concept of WAR.

The next step is to connect these three hypotheses and to propose a hypothesis that *specifies* the connection between the data and the conceptual system. (21) tries to identify the *cause* of the structural similarity among language, behaviour and reasoning connected to arguments (cf. Lakoff 1993: 206–210, Lakoff and Johnson 1980: 4–5):

(21) Premises:

- (a) The language we use to characterise arguments is partially structured by the concept of WAR.
- (b) Our behaviour during argumentation is partially structured by the concept of WAR.
- (c) Our reasoning about arguments is partially structured by the concept of WAR.
- (d) <If our language, behaviour and reasoning connected to arguments are partially structured by the concept of WAR, then a single system of principles governs talking about arguments, acting during argumentation and thinking about arguments insofar as there is a tightly structured mapping from the conceptual domain WAR to the conceptual domain ARGUMENT in the conceptual system; that is, the concept ARGUMENT is metaphorically structured.>

Conclusion:

- (e) A single system of principles governs talking about arguments, acting during argumentation and thinking about arguments insofar as there is a tightly structured mapping from the conceptual domain WAR to the conceptual domain ARGUMENT in the conceptual system; that is, the concept ARGUMENT is metaphorically structured.

After investigating other everyday concepts as well, Lakoff and Johnson generalise (21e) and arrive at one of the central theses of their theory (cf. Lakoff and Johnson 1980: 6, Lakoff 1993: 212):

(22) Premises:

- (a) The concepts ARGUMENT, TIME, QUANTITY, etc. are part of the conceptual system.
- (b) The concepts ARGUMENT, TIME, QUANTITY, etc. are metaphorically structured.

Conclusion:

- (c) Most of our conceptual system is metaphorically structured.

In the *ontological cycles* Lakoff and Johnson suppose that there is a relation which is in a certain respect the *reverse* of the previous one: certain properties of data are predicted and explained by the hypotheses of the theory. So, inferences may arise in some of the ontological cycles that are, indeed, not simple reversals of the corresponding inferences in the methodological cycles, but adopt a different perspective. In the methodological cycles the inferences are part of an argumentation process which starts from linguistic etc. data and proceeds toward more and more abstract and/or general hypotheses, and via this, to the elaboration of the theory. In the ontological cycles, the inferences serve as means which allow Lakoff and Johnson to get more and more concrete consequences of their hypotheses that can

be confronted with linguistic and other kinds of data. For instance, the following inferences present themselves:

(23) Premises:

- (a) Most of our conceptual system is metaphorically structured.
- (b) ARGUMENT is part of our conceptual system.

Conclusion:

- (c) The concept ARGUMENT is metaphorically structured.

(24) infers a certain characteristic of the conceptual organisation of our language, behaviour and reasoning connected to arguments from the metaphoricity of the concept ARGUMENT:

(24) Premises:

- (a) The concept ARGUMENT is metaphorically structured.
- (b) <If the concept ARGUMENT is metaphorically structured, that is, there is a tightly structured mapping from the conceptual domain WAR to the conceptual domain ARGUMENT in the conceptual system, then our language, behaviour and reasoning connected to arguments are partially structured by the concept of WAR.>

Conclusion:

- (c) The language we use to characterise arguments, our behaviour during argumentation as well as our reasoning about arguments are partially structured by the concept of WAR.

Then, from the conceptual organisation of our language connected to arguments they predict the behaviour of linguistic *data*, that is, the kind of systematicity that can be found in the use of metaphorical expressions related to arguments:

(25) Premises:

- (a) The language we use to characterise arguments is partially structured by the concept of WAR.
- (b) If the language we use to characterise arguments is partially structured by the concept of WAR, then we systematically talk about arguments in terms of war.

Conclusion:

- (c) We systematically talk about arguments in terms of war.

(18)–(25) appear as a *cyclic and prismatic process of retrospective re-evaluation*, which can be effective since the gap between the metaphoricity of linguistic expressions and the hypothesis of conceptual metaphor is bridged. In the course of the cycles more and more hypotheses are built into the theory, thereby explaining the following:

- (26) (a) the systematicity of metaphorical expressions, i.e. the property that they do not occur in isolation, but they make up complex systems;
- (b) the omnipresence of metaphorical expressions from everyday to scientific language;
- (c) the universal nature of metaphors, i.e. the fact that similar metaphorical expressions can be found in many languages;
- (d) the unidirectionality of metaphorical projections, i.e. the asymmetric relation between the source domain and the target domain;

- (e) the explanatory power of metaphors, i.e. the fact that with the help of metaphors we can grasp certain aspects of abstract concepts;
- (f) the creativity of metaphorical concepts, i.e. their ability to create new realities.

(26) testifies that this version of the Conceptual Metaphor Theory was developing in that its domain of application could be extended to new areas. Accordingly, it is *not circular*, because it does not exhibit one of the indicators of circularity that has been mentioned in (17e).

5.1.2. Circular aspects of Lakoff and Johnson's argumentation

Nevertheless, the argumentation of Lakoff and Johnson contains elements, too, which appear to be fallacies preventing the correct re-evaluation of the p-context and making the argumentation in several respects ineffective. Let a few simple examples be sufficient for the illustration of this.

First, the methodological and the ontological cycles are continuously *mixed* in Lakoff and Johnson's (1980) argumentation, although Lakoff (1993) attempts to separate them. Often cycles are not executed, but return halfway. This, however, might lead to the situation described in (17b), that is, to the overestimation of the plausibility values of the hypothesis that has served as the starting point of the cycle. The latter is not forced to confront (through its consequences) the other side, that is, criteria related to the linguistic and cognitive aspects. Thus (17d) arises as well because the testing of the hypotheses is not systematic enough.

Second, as is well-known, Lakoff and Johnson (1980) and Lakoff (1993) leave relevant data out of consideration (cf. (17a)). Reference to *non-linguistic data* remains rather an empty gesture because in these two works we do not find arguments presenting and analysing the results of psycholinguistic experiments. Moreover, (17f) emerges at this point as well. Lakoff and Johnson restrict the analysis of linguistic data to the linguist's intuition only (cf. e.g. Geeraerts 2006), presupposing that within a given culture there are no relevant differences among the linguistic competences of distinct individuals. However, according to McGlone (2001: 95–98), certain empirical investigations suggest that there are significant differences among our intuitions about metaphorical expressions, and our ideas can often be misleading. Haser (2005: 154) holds that Lakoff and Johnson's mistake lies in considering too small a set of metaphorical expressions as data in so far as they rely almost solely on conventional metaphors.

There are even *linguistic data* that do not behave as they should according to the theory. For example, data do not reveal systematicity to the extent that would be motivated by the existence of metaphorical concepts; it is not possible to find a principled explanation why certain aspects of the meaning of abstract concepts belong to the "used part" (cf. Lakoff and Johnson 1980: 52–53) of a metaphor and why others pertain to the "unused part" (op. cit.; see also Section 5.2 on this). Therefore, neither (18a), nor the hypotheses inferred directly or indirectly from it can be regarded as plausible as proposed by Lakoff and Johnson. (25), and via it, the inferences in the ontological cycles are problematic as well. We find similar problems if we examine (19) and (20) and their inverses in the ontological cycles.

Third, Lakoff and Johnson do not investigate properly, and do not exclude, other possible alternatives, i.e. other hypotheses aimed at explaining the linguistic data at their disposal in connection with (21d).³ This raises (17c), that is, that the theory might assign too high plausibility values to certain hypotheses.

In sum, against the background of (16), in Section 5.1.1 we have shown that the relation between data and hypotheses in this version of Conceptual Metaphor Theory is *basically built on cyclic argumentation*. At the same time, however, as we have just seen, the re-evaluation

of the p-context is defective, thus, the theory involves some of the fallacies listed in (17), too, which *may result in circular argumentation*. In this respect Haser's and McGlone's charges seem to be correct, although not because of (4) and (6), but because of (16) and (17).

5.2. *The relation between metaphorical concepts and the experiential basis*

In Section 5.1 we have shown that with respect to the relationship between the data and the hypothesis of the existence of metaphorical concepts Lakoff and Johnson's argumentation is *basically cyclic* but has circular aspects as well. As opposed to this, with respect to the relation between metaphorical concepts and the experiential basis, in the light of our characterisation of circular argumentation in (16) and (17), it seems to be the case that Lakoff and Johnson's argumentation is *circular rather than cyclic*. Let us indicate briefly, why.

Lakoff and Johnson's theory includes the hypothesis of the partiality of metaphorical structuring (Lakoff and Johnson 1980: 12–13, 81). However, it is questionable whether the latter can be accepted. More specifically, linguistic data witness partiality of a much higher degree than would be expected in the light of the hypotheses. If a certain aspect of the target domain were conceptualised with the help of the source domain and understood on this basis, then there should be a remarkable correspondence between the sub-domains of the two domains in question, since the invariance hypothesis says that

Metaphorical mappings preserve the cognitive topology (that is, the image-schema structure) of the source domain, in a way consistent with the inherent structure of the target domain. (Lakoff 1993: 215)

Nevertheless, we can find only a deformed, peculiarly reduced form of the source domain in the metaphorical expressions, and metaphorical expressions can be mapped only to some disjointed, not contiguous areas of the target domain. Hence, it cannot be the case that the target domain simply takes over the structure of the source domain; only several parts of the source domain are utilised, and only certain aspects of the target domain can be grasped with the help of a metaphorical concept. There is no explanation offered for this *bidirectional partiality*.⁴ From this it follows that the charge of circularity in the sense of (17a), (b) and (d) can be raised.

We find similar problems if we examine this issue from the point of view of the relation which Lakoff and Johnson assume between the metaphorical concepts and what they call "our thinking". It is not clear why we do not draw faulty "metaphorical entailments" (cf. Lakoff and Johnson 1980: 91–96) concerning the target domain from the properties of the source domain, and why we do not draw "metaphorical entailments" that would in principle be possible (and consequently, why we do not use related metaphorical expressions).⁵ From this it also follows that (17g) can be raised against Lakoff and Johnson's theory as well, since it simultaneously maintains incompatible hypotheses and it attributes high plausibility to these. For example, they maintain that ARGUMENT is conceptualised and understood with the help of the conceptual domain WAR and that in this way our knowledge of war determines and influences our view about arguments to a considerable extent. But they also claim that metaphorical structuring is partial, and that it concerns only certain aspects of the target domain. For instance, in the passage quoted in (1) and in its wider environment they continuously interchange the two perspectives: one of these considers metaphorical structuring as partial, and talks about the partial systematicity of conceptualisation, acting, thinking and language, and about "used" (cf. Lakoff and Johnson 1980: 52) and "unused" (op. cit.) parts of metaphors, while the other emphasises the role of conceptual metaphors which decisively determine these phenomena.

This also means that in this case *Haser was right* in claiming that the charge of circularity can be levelled against this aspect of Lakoff and Johnson's theory. However, the reason why this is so is not (10), but (16) and (17).

5.3. *From circularity to cyclicity and vice versa*

During the past three decades significant new insights have been gained which try to answer most of the criticisms we interpreted as the sources of circularity in Sections 5.1.2 and 5.2. Although a detailed evaluation of the latter lies beyond the scope of the present paper, it is important to mention briefly at least some of them in order to indicate how they might modify the picture we have drawn.

First, Lakoff and Johnson (1999) led to the substantial inclusion of the results of neurological research as a *new type of data* of central importance (cf. e.g. Lakoff and Johnson 1999, Dodge and Lakoff 2005, Lakoff and Johnson 2003 and Johnson 2007 etc.). Thus, in this respect, 'embodied realism' appears to be an instructive example of retrospective re-evaluation as mentioned in point (x) in Section 4.1, which is the very means of *turning circular into cyclic argumentation*.

Second, Conceptual Metaphor Theory motivated a series of *novel* approaches whose main aim is to overcome the shortcomings of the original version by elaborating new theory-versions or related approaches, to present counter-arguments against rival approaches and to respond to their criticism. By way of illustration, let it be sufficient to refer e.g. to Fauconnier and Turner (2002), Ritchie (2003), Gibbs (2006a, b), Kövecses (2000), (2005), Steen and Gibbs (eds.)(1999), Stefanowitsch and Gries (eds.)(2006) etc.

Third, due to criticisms of the introspective nature of data analysed in the original version, new data types have been focused on. Besides neurological data, the data base of conceptual metaphor research has been extended e.g. to experimental data (see primarily Gibb's achievements in this respect, a recent example is Gibbs and Lonergan 2007) and to corpus data (see e.g. Stefanowitsch and Gries (eds.) 2006 and Gries and Stefanovitsch (eds.) 2006) as well.

Fourth, *rival* approaches seem to become more and more dominant (cf. Glucksberg 2001, 2003, Murphy 1996, Gentner and Bowdle 2001, Yan, Forbus and Gentner 2003 etc.). The latter have raised novel problems and put forward novel hypotheses that constitute new challenges for the current version of Lakoff and Johnson's approach.

Fifth, fierce criticism has been levelled at the novel theory-versions of Conceptual Metaphor Theory as well (cf. Rakova 2002, Leezenberg 2001, Haser 2005, Rohrer 2006, Geeraerts 2006). It is not at all certain that the latter can meet this challenge. If they cannot, then its *cyclicity will turn into circularity once again*. If they can, then one may hope that the circularity can be avoided and – in the course of retrospective re-evaluation – *the cyclic and prismatic argumentation process* of conceptual metaphor research *can be continued* in an effective way.

In sum, these developments are, to our view, instructive examples of the very relationship between cyclic and circular argumentation in contemporary cognitive linguistics.

5.4. *The solution to (P3')*

On the basis of the considerations outlined in (17), a multifaceted solution to (P3') emerges:

- (H3') (a) Those versions of the Conceptual Metaphor Theory that we have examined are based on a bidirectional but not circular relation between data and hypotheses. Consequently, Lakoff and Johnson's approach is in this respect, basically *not circular*. Rather, it is *a cyclic and prismatic process of plausible argumentation* that has played a constructive role in metaphor research, since – as we summed up briefly in (26) – it revealed several phenomena that had not been scrutinised before.
- (b) Nevertheless, we have also found that in the process of Lakoff and Johnson's (1980) and Lakoff's (1993) argumentation, besides its globally cyclic character, the retrospective re-evaluation of data is in certain other respects defective. This also involves the risk that the whole of the Conceptual Metaphor Theory becomes *circular*, and through this, ineffective.
- (c) However, new developments witness the sophisticated *interrelatedness* of cyclic and circular argumentation in present-day cognitive metaphor research.

6. Conclusions

What are the implications of the above train of thought for cognitive linguistics? In fact, the outcome of our analysis motivates *far-reaching generalisable conclusions pertaining to the conduct of cognitive linguistic inquiry*.

Above all, the case study presented here seems to support our assumption mentioned in Section 4.1 which says that the result of theorising in cognitive linguistics cannot be separated from the argumentation process leading to the statements of the theory at issue. Therefore, it is some version of argumentation theory, for example the one we presented in Section 4, that may provide an appropriate *metatheoretical framework for cognitive linguistics*.

Moreover, as we mentioned in Section 1, in the debates concerning the methodological foundations of cognitive linguistics the charge of circularity has been in most cases extremely powerful. Now we can answer the question of why this is so. The first reason is that the intuition according to which it is infertile to return the termination of the argumentation process to its starting point leaving it unaltered is undoubtedly *correct*. Accordingly, mentioning circularity in the discussion is immediately understandable and rapidly convincing for the observer. The second reason is that it is impossible, or at least very hard to set up a successful defence against this charge. Therefore, the position of the accused party seems to be hopeless at the outset – whether the charge is justified or not. It is no accident that so far Lakoff and Johnson's approach could not be defended effectively enough against the charge of circularity. The case study presented in this paper illustrates why the charged party has no defence: the charges discussed in Section 2 are based on unexplicated, tacitly assumed criteria of circularity. Consequently, the accused party has been unaware of the criteria whose refutation could lead to the successful rejection of the charge at issue. Therefore, exploring the characteristics of circular argumentation is a task of great significance for cognitive linguistics research. It provides a tool for all parties that enables them to decide more accurately which components of the given approach can be still maintained, because they are cyclically structured – and which have to be corrected or even discarded since they are indeed circular. Such findings may undoubtedly *contribute to the effectiveness of theorising in cognitive linguistics and thus further the progress of the field*.

Notes

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1. For example, circular *definition*, circular *exposition*, circular *argumentation*, circular *arguments*, circular *reasoning*, circular *account*, circular *approach*, circularity *between data and theory*, the circularity of the proposed *model of metaphor processing* and the circularity of the accused *theory* are mentioned in the literature cited in the preceding paragraph.
 2. Among others the following patterns of plausible inferences can be found in the next section (cf. also Kertész and Rákosi 2006):
 - (i) *plausible modus ponens*: {it is plausible that if *A* then *B*; *A* is plausible} \Rightarrow *B* is plausible;
 - (ii) *plausible modus tollens*: {it is plausible that if *A* then *B*; *B* is implausible} \Rightarrow *A* is implausible;
 - (iii) *part-whole inference*: {*x* is a part of *y*; *x* has property *P*} \Rightarrow it is plausible that *y* has property *P*.
 The inferences will be reconstructed in a simplified form in that the indicators of plausibility (i.e. “it is plausible that”, “it is true with certainty that”) are omitted. Latent background assumptions will be set within ‘<’ and ‘>’.
 3. In Lakoff and Johnson (1980), we do not find any thorough analysis and well-founded arguments against rival approaches (cf. Leezenberg 2001: 136–137); Lakoff’s argumentation (1993: 236–237) remains fragmentary in this respect. For alternative approaches see e.g. Leezenberg (2001).
 4. Lakoff (1993: 215) tries to avoid such consequences of the Invariance Principle by narrowing down its scope to certain “fixed correspondences”. It is not clear, however, what motivates the choice of the elements of the source domain that do have a counter-part and in what cases an element is allowed to violate the principle.
 5. Cf., e.g. Murphy (1996: 187). Lakoff (1993: 210–211) tries to clarify this point in so far as he suggests that we interpret metaphorical mapping as “a fixed pattern of ontological correspondences across domains” instead of an algorithm that could be applied mechanically. This seems, however, to remain merely the *admission* that language, behaviour and reasoning do not show the extent of systematicity that is presupposed in Lakoff and Johnson (1980) and cannot be regarded as an *explanation* of why this is the case.

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