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The Conceptualisation of Argument in Writing for Academic Purposes

Abstract: Despite the long-standing tradition in research on conceptual metaphor, little attention has been paid to the use of conceptual metaphor in academic writing. The present study aims to investigate how the concept of ARGUMENT is realized in two academic contexts: (i) L2 speakers writing in English, and (ii) L1 speakers writing in Swedish. Following Lakoff and Johnson (1980/2003), four related conceptual metaphors (AN ARGUMENT IS A JOURNEY; AN ARGUMENT IS A BATTLE; AN ARGUMENT IS A BUILDING; AN ARGUMENT IS A CONTAINER) were identified and examined in a sample of Bachelor and Master theses written in English or Swedish by native speakers of Swedish. The main questions here are (i) to what extent the students employed these metaphors in their conceptualization of an argument and (ii) whether there are any differences in the patterns of conceptual metaphor depending on the language in which the texts were produced. The results suggest that while for the most part, academic texts written in English and Swedish both employed metaphorical conceptualizations of ARGUMENT as a JOURNEY and as a BUILDING, precisely which linguistic expressions predominated differed between the two languages. The findings have implications for (second-language) teaching, such as the development of academic writing courses, in particular in the context of English for non-native writers and for the training of instructors for such courses.

Keywords: cognitive linguistics, academic writing, conceptual metaphor, conceptualisation, argument

1. Introduction

In recent years, there has been an increased interest in the application of the conceptual metaphor theory (Lakoff and Johnson 1980/2003), which has its origin in the framework of Cognitive Linguistics, within applied linguistics (Steen 2006). A central concern of this body of research has been metaphor in language as use, which "includes ordinary discourse (any kind of communication by means of language, typically in some institutional context), language learning and language

teaching of various kinds, and more general practices of language counseling and advice, such as text design" (Steen 2006: 23). On the one hand, the present paper continues in line with this tradition, focusing on the use of particular metaphor in language for specific purposes (LSP), more specifically on written discourse within the domain of language learning. On the other hand, there has been relatively little emphasis on potential differences in the conceptualisation of certain concepts from an L1 versus L2 perspective.

Thus, the aim of this project is to address the following questions:

1. Assuming conceptual metaphor theory can be applied within an LSP context, how do L1 and L2 users conceptualise ARGUMENT in written academic discourse?

2. Are there differences in the conceptualisation of ARGUMENT in Swedish (L1) and English (L2)?

Since argumentation is a central aspect of writing for academic purposes, the concept of ARGUMENT is a crucial one to explore if one is to gain an understanding of how texts are created in an academic setting. Such an understanding will then have direct practical implications for language learning and language teaching.

1.1. Language for specific purposes (LSP)

Within applied linguistics, more specifically L2 acquisition and L2 teaching, the term *language for specific purposes* (*LSP*) refers to research and practice aimed at developing learner communicative competence in a particular academic or professional setting, such as law, business, tourism, natural science, engineering, etc. (e.g., Hutchinson and Waters 1987, Swales 1992, Hyland and Hamp-Lyons 2002). Since the focus of this paper is on metaphor within academic texts written in English, the narrower term *English for academic purposes* (EAP) will be employed (Kuteeva 2010, 2011; Hyland and Hamp-Lyons 2002). EAP is typically concerned with helping students at a higher education setting develop the necessary communication skills in order to be able to function well within an English-speaking academic context.

The intrinsically practical orientation of EAP might at first glance appear to have little common ground with the conceptual metaphor theory. However, the metaphor analysis has flourished in research on discourse within domains as varied as medicine (Coulehan 2003), media (Porto and Romano 2013), law (Berger 2013) and politics (Lakoff 1995), to name but a few. Therefore, it stands to reason to assess whether the conceptual metaphor theory is applicable to EAP. Before we attempt to do so, however, the following section presents a brief overview of the varying metaphorical conceptualisations of a particular concept, namely that of ARGUMENT, which have been advanced by Lakoff and Johnson (1980/2003).

1.2. Conceptual metaphors related to ARGUMENT

Within the conceptual metaphor theory metaphors are seen not as mere figurative language, but as cognitive processes which scaffold thinking. In this sense, the concept of ARGUMENT differs from the view from traditional semantics, according to which an argument is to be understood as 'a line of thoughts,' 'disagreement,' or 'a reason given to support something.' This view is problematic in that it does not capture the wealth of information we have stored about the concept, such as the stages through which it goes, the patterns of exchanges between participants, the force of the reasoning, among others.

By contrast, Lakoff and Johnson (1980/2003: 90) contend that there are generally four conceptual metaphors related to ARGUMENT. These metaphors then manifest themselves linguistically in varying instantiations. First, the conceptualisation AN ARGUMENT IS A JOURNEY emphasises the process of argumentation, as evident in the examples presented by Lakoff and Johnson (1980/2003: 90):

1. We have set out to prove that bats are birds.
2. When we get to the next point, we shall see that…
3. So far, we have seen that no current theory will work.
4. This observation points the way to an elegant solution.
5. Do you follow my argument?
6. I'm lost.

Another conceptual metaphor to mention here is AN ARGUMENT IS A BATTLE, which focuses on the force of an argument, as in the following examples:

7. She *attacked* every weak point in my argument.
8. They *defended* their position ferociously[1].
9. He *shot down* all my arguments.
10. He *withdrew* his offensive remarks.
11. I *hit back* at his criticism.

An argument can also be conceptualised in terms of a building (AN ARGUMENT IS A BUILDING), thus drawing on the content but most of all the quality of the argument:

12. We've got a *framework* for a *solid* argument.
13. If you don't *support* your argument with *solid* facts, its whole *framework* will collapse.
14. We will show his argument to be without *foundation*.
15. With the *groundwork* you've got, you can *construct* a pretty *solid* argument.

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[1] The word *ferociously* is not italicised, i.e., highlighted, in the original, but it could be claimed that it too contributes to the conceptualisation of ARGUMENT as a battle. However, although there are other such examples to be found amongst those shown here, to what extent the categories and examples presented by Lakoff and Johnson can be extended is beyond the current scope.

Drawing on the image schema 'inside-outside,' an argument can furthermore be conceptualised as a container (AN ARGUMENT IS A CONTAINER), which points to the content of an argument:

16. Your argument doesn't have much *content*.
17. That argument has *holes* in it.
18. Your argument is *vacuous*.
19. I'm tired of your *empty* arguments.

2. Method

Against this background, it was investigated whether these conceptualisations can be found in academic texts written in either English or Swedish by students whose native language was Swedish. The materials were Master's theses by Stockholm University alumni (2012–2015), out of which 21 were written in English and 25 in Swedish. They came from 12 different disciplines such as literature, psychology, political science, natural sciences, religious studies, journalism, gender studies, and linguistics to name a few. According to the university's regulations, the typical length of a Master's thesis is expected to be between 10,000 and 15,000 words (Holmqvist and Svennerstam 2015), although individual departments are free to set word count limits of their own. For instance, the word count limit at the English department is between 12,000 and 15,000 (Mezek, personal communication, 11 May 2016). The mean size of the theses in the sample was 13,468 words.

The reason for the selection of precisely these languages is the fact that, with the exception of the Netherlands, Sweden is the country with the highest percentage of English-language instruction in higher education amongst non-English-speaking countries (Wächter and Maiworm 2008). For example, Kuteeva (2011: 7) reports that "in 2009, nearly two thirds (65%) of Master's programmes in Sweden were taught in English." This is undoubtedly linked to two related processes: the spread of English as a *lingua franca* amongst universities (Björkman 2013), as well as what has been termed 'internationalisation at home' (Nilsson 2003). Typically, the decision concerning the choice of the language in which a thesis is written lies with the student. Since, on the practical level, these processes would only be possible if students (and teachers) have "adequate language competences" (Kuteeva, 7), the selection of academic texts written by students whose L1 is Swedish should be a fitting choice for the purposes of this paper.

It is worth highlighting that although Lakoff and Johnson are concerned with the conceptualisation of ARGUMENT, that does not entail that the linguistic expressions of it should contain the word *argument*. Thus, the study focused on manual extraction of expressions which convey argumentation in a wider sense,

e.g., *theory*, *claim*, *reasoning*, *understanding*, *position*, *hypothesis*, *conclusion*. Next, the examples found were categorised into one of the four categories presented by Lakoff and Johnson. Inter-rater reliability was calculated using Cohen's Kappa statistic, to ensure that the examples had been categorised reliably (Kappa=.81, p<.001). According to Landis and Koch's (1970) guidelines, the level of agreement was found to be substantial.

The table below presents some examples from the data, together with the category they were assigned to:

Table 1. Examples of the conceptualisation of ARGUMENT found in students' writing in Swedish and English

Metaphor:	Example:
JOURNEY	This two-fold understanding can be examined by looking at *the point of intersection*.
JOURNEY	The position we have *arrived* at is…
BUILDING	*Based* on that assumption, one can claim that…
BUILDING	This also *supports* previous researchers' conclusions.
BATTLE	Användandet av begreppet har *försvarats* med att… ('The use of the term has been *defended* by…')
CONTAINER	Dessutom finns i G:s teorier … också en etisk aspekt. ('Moreover, in G's theories there is also an ethical aspect.')
CONTAINER	*Innehållet* av detta argument är inte av sådan karaktär. ('The *content* of this argument is not of such nature.')
other*	… whether one is able to *draw conclusions* that answer the research questions.
other*	Det är på denna grund teorin *växer fram.* (lit. 'It is on such ground that the theory *grows.*')

* Not found in Lakoff and Johnson's categorisation.

3. Results

The first question to ask is what conceptual metaphor types were found by language (see Figure 1). In general, the categories ARGUMENT AS A BUILDING and ARGUMENT AS A JOURNEY were the most frequent ones both in texts written in Swedish and in English. The category 'other' was also present in both languages. Conceptualising ARGUMENT in terms of a battle or a container did not occur in the English data, and was only rarely found in the Swedish data (8.5%). Therefore, these two categories will not be discussed further here.
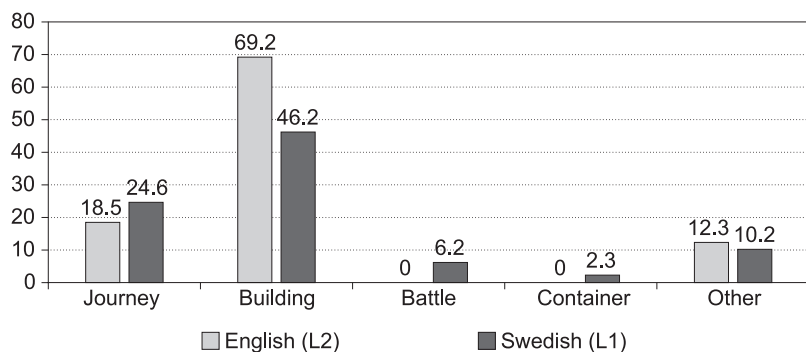
Figure 1. Percentage of conceptual metaphor types by language

Next, it was assessed whether the differences between languages are significant within each category. Within the conceptualisaiton of ARGUMENT AS A JOURNEY, the differences between theses written in English and those written in Swedish were not significant (chi-sq.=1.14, df=1, p=.29). By contrast, ARGUMENT AS A BUILDING occurred significantly more frequently in the texts written in English than in Swedish (ch-sq.=6, df=1, p=.01).

In the following, we address each of the three conceptualisations separately, with a particular focus on the different linguistic expressions attested in the materials. The most linguistically varied category was that of ARGUMENT AS A JOURNEY, in which different linguistic expressions were attested in the materials, e.g.:

20. This substantial and descriptive analysis seemed needed in order to be able to draw conclusions along the *way*.

21. This view *points* in the *direction* of the latter theory.

22. This two-fold understanding can be examined by looking at the *point of intersection*.

23. This seemed to be a good *point of departure* to explore the topic.

24. The conclusion *starts* with a summary of the findings.

25. … which would *lead* to the conclusion that…

26. Phillips *follows* this line of argumentation.

27. The authors *reached* the same conclusion.

28. The position we have *arrived* at is…

However, within the same category, there were only two expressions, namely *point of departure* and *point of intersection*, occurred with any considerable frequency. Out of these, the latter was clearly significantly more frequent in texts written in Swedish than in English (chi-sq.=59.24, df=1, p<.001). The rest of the expressions occurred quite infrequently and as such were no more likely to be found in texts written in the students' L1 than in their L2 (see Figure 2).
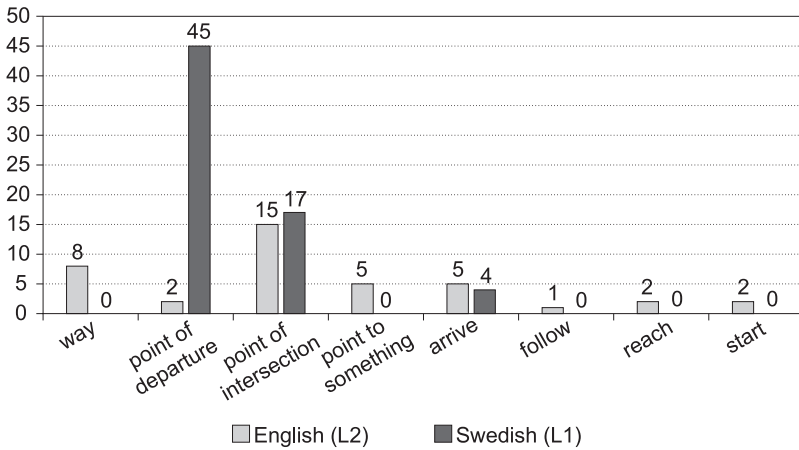
Figure 2. AN ARGUMENT IS A JOURNEY: number of occurrences of a particular linguistic expression by language

The conceptual metaphor which was overall the most frequent one (AN AR-GUMENT IS A BUILDING) was also found to be quite varied in terms of how it is expressed in the students' writing. Several different linguistic expressions were attested, e.g.:

29. The empirical analysis *supports* this interpretation.

30. The empirical analysis is *based on* hypothetical reasoning.

31. The study can be analysed within a theoretical *framework* of peace journalism.

32. His ideas lay the *groundwork* for understanding the importance of…

33. This understanding does, however, lack *solid foundation*.

34. Hon foreslår en modell som *bygger på* tidigare teorier (She suggests a model which *builds upon* previous theories.)
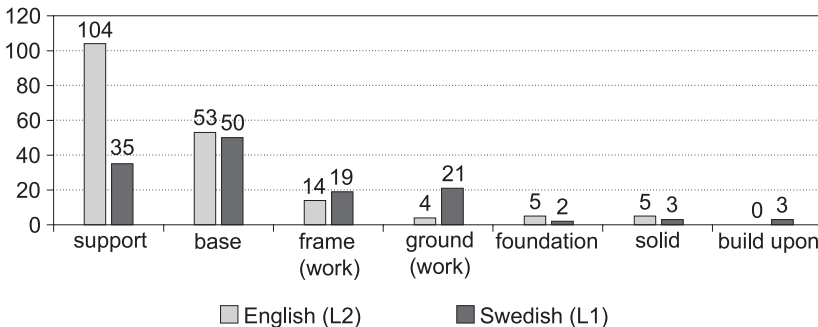

Figure 3. AN ARGUMENT IS A BUILDING: number of occurrences of a particular linguistic expression by language

Similarly to the previous conceptual metaphor, here we find cross-linguistic differences as well (see Figure 3). Students writing in their L1 were significantly more likely to conceptualise argumentation in terms of *ground(work)* than in their L2 (chi-sq.=26.34, df=1, p=.03). By contrast, the word *support* occurred significantly more frequently in theses written in English than in Swedish (chi-sq.=45.24, df=1, p=.02).

Finally, there were some linguistic expressions which were clearly related to argumentation but which, nevertheless, did not fit Lakoff and Johnson's categorisation. These expressions were no more frequent in either language. Some examples are given below:

35. This won't allow for *drawing* conclusions representing broader populations.

36. He *develops* his arguments.

37. Det är på denna grund teorin *växer fram* (lit. 'It is on such ground that the theory *grows*.')
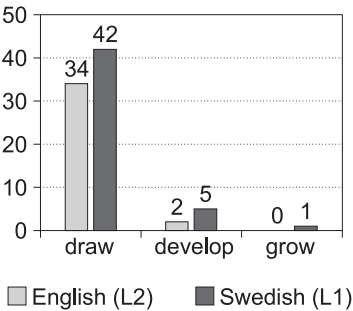

Figure 4. 'Other': number of occurrences of a particular linguistic expression by language

A further statistical analysis confirmed that for all conceptual metaphor categories, there are significant differences in the frequency of occurrence of the individual linguistic expressions (see Table 2).

Table 2. Particular linguistic expressions are significantly more frequent within language and conceptual metaphor category

Conceptual metaphor:	Language:	Test statistic:
JOURNEY	English	chi-sq.=16.5, df=8, p=.04
JOURNEY	Swedish	chi-sq.=21, df=2, p<.001
BUILDING	English	chi-sq.=128.9, df=5, p<.001
BUILDING	Swedish	chi-sq.=21, df=4, p<.001
'Other'	English	chi-sq.=17.9, df=1, p<.001
'Other'	Swedish	chi-sq.=46.3, df=3, p<.001

For example, within the category ARGUMENT AS A JOURNEY in texts written in English, some linguistic expressions are significantly more frequent than others. This applies to all conceptual metaphor categories and languages under investigation. In other words, there are clear preferences in how a particular conceptualisation of ARGUMENT (be it as a journey, building, or 'other') is expressed in language.

4. Discussion and future directions

The current study represents further evidence for the applicability of the conceptual metaphor theory within the field of language for specific purposes. It is evident that students' writing in the context of argumentation is indeed scaffolded by conceptual metaphors. This assumption, which was the point of departure of the study, has now been confirmed, as evidenced by the finding that numerous examples of Lakoff and Jonhson's (1980/2003) categorisation of conceptual metaphors pertaining to the concept of ARGUMENT, as well as to a further category, were well attested in the data.

One of the main questions addressed by this project is how L1 and L2 users conceptualise ARGUMENT in written academic discourse. It seems that out of the four conceptual metaphors presented by Lakoff and Johnson, argumentation is most often conceptualised in terms of a journey or a building, and very rarely in terms of a battle or a container. It is worth stressing this finding, since in their original publication, Lakoff and Johnson make no mention of the relative frequency of these conceptual metaphor categories. One might speculate that the reason for this difference in frequency lies in the difference with which student writers encounter the respective concepts. In other words, they will have had more experience with journeys and buildings than with battles and containers. However, the conceptual metaphor AN ARGUMENT IS A CONTAINER draws on the image schema 'inside-outside', which is grounded in our basic perceptual experience. As Johnson (1987) has emphasised, image schemas related to containment have their basis in bodily experience, which begins in infancy. Therefore, by the time the students are faced with the task of writing their Master's theses, they will have had plenty of exposure to this particular image schema and the conceptual metaphors that draw upon it. Thus, it would follow that conceptualising an argument in terms of a container would be a pervasive strategy, when, in fact, it was barely attested in the data.

The question remains why the metaphors AN ARGUMENT IS A JOURNEY and AN ARGUMENT IS A BUILDING were the most frequent. As mentioned in Section 1.2, these two conceptual metaphors highlight different aspects of argumentation: the former stresses the process of an argument, whereas the latter focuses more on its quality and content. Given the prominent role of reliability and validity within scientific research (and, by extension, writing for academic purposes), it is not surprising that the quality and content of argumentation would be of such high

importance, which would then be reflected in students' writing. Argumentation as a process, on the other hand, is crucial in, for example, the literature review, where the (student) writer would show how the understanding of a particular topic has changed over time, or how it varies amongst different theoretical frameworks. Employing conceptual metaphors such as AN ARGUMENT IS A JOURNEY would, then, highlight this aspect of argumentation. To conclude, drawing attention to the process of argumentation, as well as its content and quality is highly desirable in writing for academic purposes, which is why it would stand to reason that this is reflected in the conceptual metaphors students employ in their writing.

The second research question asked whether there are any differences in the conceptualisation of ARGUMENT in Swedish (L1) and English (L2). The answer to this question seems to hinge on the level of specificity with which we regard conceptualisation. On the one hand, as discussed above, both in texts written in Swedish and in English, an argument was most commonly conceptualised in terms of a journey or a building. In that respect, there were no differences between L1 and L2 texts. On the other hand, there were certain linguistic expressions related to these conceptual metaphors which were preferentially used in one language but not the other. More specifically, the point of departure (*utgångspunkt*) of an argument as well as its groundwork (*grund*) seem to be more relevant in texts written in Swedish than in English. Conversely, showing support for an argument is something writers seem more concerned about in texts written in English.

The reason for these differences is worth exploring. It would, for example, be interesting to assess to what extent courses taught in English emphasise the need to provide evidence for an argument (i.e. show support), while courses taught in the students' L1 stress the process of an argument (including its starting point), as well as its foundation. An alternative (but by no means mutually exclusive) explanation of these differences might lie in the fact that student writers were L2 users in some cases. Naturally, an investigation of this kind requires an analysis of course context such as course syllabi, lecture and seminar materials. To assess whether the fact that the students were writing in their L1 or L2 influences the choice of linguistic expression it would be beneficial to analyse academic texts by (i) English L1 users and (ii) English L2 users with a native language other than Swedish. Although such an endeavour is beyond the scope of the current investigation, it would provide fruitful testing ground for further research. Somewhat relatedly, it is undoubtedly worth examining what other metaphorically construed concepts, apart from METAPHOR, are relevant for academic texts. Reddy's (1979) classic work on the CONDUIT metaphor in communication, as well as Kövecses's (2002) discussion of COMMUNICATON (e.g., as sending ideas or meaning) and, more generally, ABSTRACT COMPLEX SYSTEMS (e.g., conceptualised as plants or machines) could provide a fruitful starting point here. Finally, the differences between the academic disciplines need to be analysed and evaluated systematically. At present, more data is being collected to address this issue.

5. Conclusion

To conclude, it seems like the conceptual metaphor theory can indeed be applied to the field of language for specific purposes. An analysis of the conceptual metaphors for argumentation present in students' Master theses written either in their L1 (Swedish) or an L2 (English) revealed that this particular concept is most commonly represented linguistically in terms of a journey or a building, which is in line with Lakoff and Johnson's (1980/2003) proposal. In addition, it was found that argumentation was associated with some linguistic expressions, such as *to draw a conclusion*, which were not found in Lakoff and Johnson's categorisation. Although the same conceptual metaphors occurred with an equal relative frequency in both languages, the actual linguistic expressions related to them differed, such that in texts written in English *support* occurred much more frequently than in Swedish. By contrast, *point of departure* (*utgångspunkt*) as well as *groundwork* (*grund*) were more common in theses written in Swedish. It remains to be confirmed by further research whether these differences are the result of varying practices in academic writing within the two languages, as hypothesised here.

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