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LINGUISTIC THEORY AND GOOD PRACTICE: HOW COGNITIVE LINGUISTICS COULD INFLUENCE THE TEACHING AND LEARNING OF ENGLISH PREPOSITIONS

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Abstract

How can we make the teaching and learning of grammar more interesting? How do we get away from rote learning to more efficient learning situations? How can we provide learners with a more holistic view of language, its speakers, and their contexts? These are questions that language teachers regularly seek to answer, but typically struggle with. In this chapter, I focus on the teaching and learning of the English prepositions in and on from a Swedish L2 perspective. It is argued that the theoretical framework of cognitive linguistics provides useful didactic information for practice in second language teaching and learning.

Introduction

Learning how to use the prepositions of a second language (L2) is notably hard (see e.g. Morimoto and Loewen, 2007). Not only are prepositions short, unstressed and perceptually weak (see Field, 2008: 5), they are highly frequent items that have developed a multitude of senses (see Morimoto and Loewen, 2007; Tyler & Evans, 2003/7) that may be hard for the L2 learner to navigate between.

In this chapter, I focus on the English prepositions in and on from a Swedish L2 perspective. More specifically, I discuss how cognitive linguistics (CL) might inform the teaching and learning of usage-patterns including temporal in and on-instances for Swedish L2 speakers of English. Although English and Swedish are closely related languages, and the basic meanings of in and on and their Swedish equivalents i and på are more or less the same (in/i is connected with inclusion and on/på with contact and support), English in and on and their Swedish equivalents appear to have lived quite different lives and developed quite different usage patterns. Some of the usage patterns involving temporal instances of these prepositions are indeed shared between the languages. Patterns that are correct in one of these two languages (e.g. uses of the Swedish phrase på sommaren (on the summer) where speakers of English would say in the summer), however, would typically be incorrect if translated literally into the other language (Johansson Falck, 2015). Given the many differences between the languages with respect to these patterns, Swedish L2 learners of English may potentially be influenced not only by difficulties related to the high frequencies and short, weak and unstressed qualities of prepositions in general, but also by negative transfer, i.e. cross-linguistic influence resulting in mistakes (see Odlin, 1989: 26) from their L1. Practice focusing on these specific issues may thus have several types of challenge to deal with.
Challenges connected with the teaching and learning of patterns involving L2 prepositions, however, are by no means new. Accordingly, several types of strategies have been used to deal with issues such as these. Traditional attempts from the 1960s and 1970s include practice influenced by theories of transformational-generative grammar (Chomsky, 1965, 1966) and pedagogical grammars (e.g. Saporta, 1966, 1973) adhering to the view that language is an isolated system that operates under its own and typically arbitrary set of rules. According to this view, language is rule-governed behaviour and L2 acquisition equal to “mastering the rules and memorizing the exceptions” (Tyler, 2012: 4).

The early 1970s then saw a pragmatic turn initiated by scholars such as Austin (1962), Searle (1969), and Grice (1975). This was largely a reaction to Chomsky’s treatment of language as a system disconnected from general cognitive processes. Their focus on pragmatics and the interplay between form and function in communication influenced practice in second language a great deal, and brought about a focus on authentic language materials and interactive learning materials as well a substantially reduced interest in explicit grammar teaching (see De Rycker and De Knop, 2009: 33).

The pragmatic turn has largely increased the efficiency in language teaching and learning but has generally lacked a theoretical framework that supports all aspects of this process (see De Rycker and De Knop, 2009: 33). In particular, teachers adopting a pragmatic approach have lacked a theoretical framework that takes into account aspects pertaining to language use (see De Rycker and De Knop, 2009: 33; Tyler 2012: 5). Although communicative, task-based approaches have indeed meant a shift from explicit learning (i.e. learning based on explicit teaching) to implicit learning (i.e. “learning through rich input, meaning negotiation, and pushed output” (Tyler, 2012: 4)) language teachers adopting a communicative approach have continued to offer explanations for the grammar in the L2, and these have typically been based on traditional theories (see Tyler, 2012: 4), which do not typically take usage patterns into account.

In a CL view, language is symbolic and reflects thought (Langacker, e.g. 1987, 2002). Far from being seen as an isolated entity divided into a number of compartmentalized subsystems (i.e. phonology, morphology, syntax, the lexicon, semantics, and an additional layer of pragmatics), language is considered “an integral part of human cognition” (Langacker, 1987: 12). Moreover, meaning is considered central to language rather than separate from syntax and other aspects of language. Crucially, not only lexical items are used to communicate meaning, so is grammar. Both the lexicon and the grammar are considered meaningful, symbolic structures that pair semantic structures with phonological ones (Langacker, 1987: 11). A given speaker’s choice of one type of construction instead of another is thus not a choice between different ways of expressing the same underlying structure (cf. Chomsky, 1957), but one that is motivated by how well specific constructions match the meaning that a given speaker wants to express, and/or his or her specific perspective or focus of attention at a given point in time. For instance, speakers that say *He sent a letter to Susan* emphasize “the path traversed by the letter with Susan as goal” (Langacker, 1987: 39), and speakers who say *He sent Susan a letter* “the resulting state in which Susan possesses the letter” (Langacker, 1987: 39). CL then, does not consider grammar to be a mere set of rules for combining words and
sentences, but a means for cognitively organizing one’s experience with language (see Bybee, 2008: 216).

From the view that language goes back to speakers’ attempts to construe intended meaning, it also follows that language is motivated and usage-based. Moreover, given that language always occurs in a context of use and is shaped by usage, usage events are crucial for shaping and getting to know language (Bybee, 2006). From usage-events we abstract conventional units and create “a vast network of phonological, semantic and pragmatic associations that range over what has traditionally been designated as lexicon and grammar” (Bybee, 2008: 216-217; cf. Langacker, 1987: 3). Language, however, is not only motivated by our experiences of language use, but also by our embodied experiences of, and interactions with, the world around us (see Gibbs, 2006: 174-180). Meaning, on a CL account, is embodied and inextricably linked to our understanding of the world around us as we know it.

In recent years, the pedagogical implications of CL have been observed by a large number of scholars (see e.g. Pütz, Niemeier and Dirven, 2001a and b; Achard and Niemeier, 2004; Boers and Lindstromberg, 2006; Robinon and Ellis, 2008; Boers and Lindstromberg, 2008a; Ellis and Cadierno, 2009). Moreover, a growing body of studies has reported experimental evidence and observational results in linguistics areas such as grammar (e.g. Lindstromberg and Boers, 2005 Niemeier and Reif, 2008; Tyler, Mueller and Ho, 2010), vocabulary, phraseology and metaphor (e.g. Kövecses and Szabó, 1996; Boers, 2000; Boers and Lindstromberg, 2008b; Verspoor and Lowie, 2003; Csábi, 2004; Berényi et al. 2008) showing that theoretical constructs can provide useful didactic information and good models for second language teaching and learning.

In this chapter, I discuss how CL might inform practice in second language for Swedish L2 speakers of English. My discussion is based on previous corpus linguistic analyses of English in and on instances and their Swedish equivalents i and på in talk about temporal concepts. My main aim is to show how CL might be used to relate seemingly arbitrary patterns in language (i.e. the grammatical patterns of temporal in and on, and i and på) not only to one another, but also to people’s embodied experiences of the world around them, and how these patterns, in turn, may be used to inform L2 practice. I will do so partly by giving a brief background to how temporal concepts are generally structured by means of spatial ones, and partly by discussing how the specific usage patterns of temporal in and on might be explained on a CL account. First, however, an alternative teaching proposal will be briefly considered.

Grammar-based ways of explaining temporal in and on to Swedish L2 learners of English

Explicit teaching of how to use the patterns of temporal in and on has involved teaching the rules provided by grammar books intended for Swedish L2 learners. In turn, as is coherent with theories treating language as an isolated system that operates under its own rules (Chomsky 1965, 1966), grammar books used for this specific audience have tended to state the rules rather than explaining them in relation to systematic ways of thinking about things in the world around us. Svartvik and Sager (1996), for instance, state that on is used about days (e.g. on Sunday, on August 18 and on next Monday) and in the phrase on
one occasion (Svartvik and Sager, 1996: 409). In, on the other hand, is used in reference to “a period of time” [my translation] (e.g. in (the) summer, in the nineteenth century, in August, in six weeks, and in less than four minutes), a part of a day (e.g. in the afternoon and in the evening) and in negative clauses like I haven’t seen him in years (Svartvik and Sager, 1996: 409). Simply memorizing rules, however, may be both hard if these are not explained in relation to something that learners can relate to and use as scaffolding for the patterns they are supposed to learn. Moreover, given the imprecise quality of some of the labels (Why are August and less than four minutes labelled periods of time when Sunday is not? And why do speakers of English say at night if in is generally used together with phrases referring to parts of days?) L2 learners may find it hard to know when a given rule should be applied.

Thinking of temporal in and on constructions in terms of spatial scenes
In a CL view, using linguistic constructions does not merely involve doing something with language. It involves conceptualizing (i.e. cognitively processing, see Langacker, 1987: 5) the meaning construed by the specific constructions involved. A construction then, corresponds to a specific conceptualization, which it structures in its own specific way (cf. the above comparison between He sent a letter to Susan and He sent Susan a letter). Experimental evidence for this view comes from studies showing that “real bodily action is at the root of meaning conveyed by language” (Glenberg and Kaschak, 2002: 563, see also Gibbs, 2006: 174-180), from ones showing that understanding meaning is intimately connected with people mentally simulating the meaning construed (Gibbs and Matlock, 2008), and from ones showing that talking about specific actions (e.g. grasping and kicking) activate the same neural assemblies as actually performing the actions mentioned (for a review see Gibbs, 2006).

As is coherent with the view that constructions structure conceptualizations, Tyler (2012: 133) assumes that prepositions designate relations between elements which are conceived as constituting abstract spatial scenes. Prepositions, she argues, “provide the primary system for describing spatial relations” (Tyler, 2012: 133) and then moves on to explain the senses of spatial in, on and at to L2 learners of English by means of visuals. She reports on two experimental studies in which she successfully taught the spatial meanings of these prepositions by illustrating and describing the patterns in terms of spatial scenes. Her studies show that participants who had received CL-based instruction were significantly better at “appropriately interpret[ing] and distinguish[ing] the uses of the targeted prepositions” (Tyler, 2012: 165). Fourteen professional English translators whose L1 was Italian participated in the first study (Tyler, Mueller and Ho 2010a). Participants had all studied English for more than 10 years, and were enrolled in a short-term program at a US university. Despite their already being highly advanced learners of English, they “demonstrated significant gains after receiving only two hours of instruction” (Tyler, 2012: 165). Sixty-three adult English learners (aged 18-25), and enrolled in a university in Hanoi, Vietnam participated in the other (Tyler, 2012: 160-164). Half the number of these received cognitive instruction similar to the one given to the participants in the first study. The other half received a traditional approach to the prepositions. The results show that although the two groups performed equally well on pre-tests, and both groups achieved significant gains after instruction, the cognitive group made significantly greater gains than the traditional one. In other words, not only highly advanced L2 learners who were trained to be analytical and had a high level of metalinguistic
awareness gained from cognitive instruction, so did less advanced L2 learners whose native language was very different from English.

Similarly, Verspoor and Lowie (2003) and Csábi (2004) show that L2 learning of extended meanings is significantly facilitated if learners are made aware of the basic spatial meaning of a word (e.g. Verspoor and Lowie, 2003; Csábi, 2004). Seventy-eight Dutch L2 learners of English from three classes at two Dutch schools participated in Verspoor and Lowie’s (2003) study. Participants had all learned English for at least three years and were enrolled in pre-university courses. The study shows that learners who were provided with a core sense of polysemous words become better at guessing and remembering the figurative meaning of these words than did those who were provided with nonliteral cues or with no cues at all (Verspoor and Lowie, 2003: 547). In Csábi’s (2004) experiment the meaning of the verbs hold and keep was taught to fifty-two eight graders who were all L1 speakers of Hungarian. The learners were divided into two groups; one that received cognitive linguistic explanations of polysemy networks and motivations for the sense extensions, and a second group that was introduced to a number of English sentences with different meanings of these specific verbs, and then asked to translate the sentences into Hungarian. The results showed improvement from pre test to post test for both groups. The cognitive group, however, outscored the group which had received instruction based on a grammar/translation approach to language learning.

Similar to these studies, temporal **in** and **on** instances may also be thought of as constructions that structure conceptualizations in specific ways, and the relationships that they are part of as abstract spatial scenes. Temporal relations, however, are quite abstract and may not be possible to think and talk about in a structured way unless we use our experiences of other more concrete and/or delineated concepts. One such domain of experiences is that of spatial relationships.

As has been attested by numerous studies of a broad range of languages all over the world (see e.g. Lakoff and Johnson, 1999; Evans, 2004; Núñez and Sweetser 2006; Radden, 2003) and by a wealth of experimental evidence (see e.g. Boroditsky & Ramscar, 2002; Casasanto and Boroditsky, 2008; Núñez and Sweetser, 2006) the domains of TIME and SPACE are closely linked. Accordingly, based on the patterns observed in English, Lakoff and Johnson (1980) propose an entire system of conceptual metaphors that structures speakers’ understandings of TIME by means of their experiences of SPACE. In this system, speakers conceive of the present as being at their present location, of the past as being behind them, and of the future as being ahead of them (Lakoff and Johnson, 1999: 140). This way of structuring TIME by means of SPACE is reflected in English sentences such as That’s all behind us now. [---] We’re looking ahead to the future. He has a great future in front of him (Lakoff and Johnson, 1999: 140), but has also been observed in a number of languages all over the world (Radden, 2003).

In this system, fixed durations of time such as those referred to in the temporal **in** and **on** instances discussed here, are cast as bounded regions of space. Temporal **in** instances are conceptualized as containers (see Lakoff and Johnson, 1999: 153), and temporal **on** instances as supporting surfaces (used with **on**, see Lindstromberg, 2010: 51). Moreover, we may use these spatiotemporal locations to locate the things that we do and the things that we experience...
in time. This appears to be the function that both temporal in and on instances and their Swedish equivalents i and på instances primarily serve (Johansson Falck, under review b).

A CL account of temporal in and on
Several studies done within the framework of CL have focused on English prepositions (e.g. Brugman, 1981; Lakoff, 1987; Lindstromberg, 1998/2010; Tyler and Evans, 2003/7, and Bączkowska, 2011), and some of these specifically on temporal in and on (e.g. Bączkowska, 2011, and Lindstromberg, 1998/2010). The most comprehensive explanations of these specific uses are offered by Lindstromberg (1998/2010). As is coherent with the attested link between TIME and SPACE, Lindstromberg explains the patterns of temporal in and on in terms of how their basic spatial meanings construe temporal relationships in terms of spatial ones. In, which in its basic spatial sense is used together with a landmark that has an interior and a boundary (Lindstromberg, 2010: 31), is typically used with temporal landmarks that represent “a time which is long enough for us to be able to think of it as a frame or space that something can be in” (Lindstromberg, 2010: 77). Examples would be in the Stone Age, in the last century, in 2015, in winter, and in March. Fixed durations of time that are longer than a couple of days are virtually always used with in (Lindstromberg, 2010: 77). The preposition on, on the other hand, is typically used together with medium sized units of time. Examples are on Friday and on the day that (Lindstromberg, 2010: 69). These uses can be compared with uses of at, which tend to be about “(almost) invisibly small and point-like” units of time (Lindstromberg, 2010: 70). Examples of these include at that moment, at 10.30, at noon, and at dusk. By being based on a match between the constructions and the quality of the concepts involved, Linstromberg’s explanations offer a principled way of thinking about the patterns of temporal in and on that is systematically linked to our experiences of spatial relationships. Although the size of the unit of time landmarks may not explain all temporal in, on and at uses, knowledge about these tendencies could potentially help the learner make qualified guesses with regard to using these specific prepositions in a correct way. Units of time that are longer than a day are quite likely to be cast as rooms (used with in), those that are shorter than a day tend to be used with at, and those that are about a day long with on (cf. Johansson Falck, 2015) (Picture 1).

Some of the patterns of temporal in and on in stances discussed by Lindstromberg may indeed be stated in terms of grammatical rules alone (e.g. on is used about days and in the phrase on an occasion (Svartvik, 1996)). Explanations that do not consider the ways in which the basic spatial meaning of in/on might have motivated these specific temporal instances, however, do not provide a systematic way of thinking about these patterns. Unlike grammar rules that simply state when to use specific types of temporal phrases, explanations that go back to spatial information provide L2 learners with scaffoldings that they can relate to no matter their own language background. Given that these scaffoldings are rooted in our understanding of the world around us, they appear highly useful both for structuring new lexical information and for memorizing patterns.
My own analysis of a random set of temporal *in* and *on* instances from the **British National Corpus (BNC)** supports Lindstromberg’s claim that instances such as these are largely explicable in terms of spatial relationships in general, and in terms of the size of the landmarks involved in particular. 56.8 per cent (48.4-65.3) of temporal *in* instances are used together with longer units of time such as centuries, years, months, and weeks, and 77.6 per cent (70.6-84.7) of *on* instances are used in talk about days. 43.2 per cent (51.6-34.7) of the remaining *in* instances and 22.4 per cent (29.4-15.3) of *on* appears related to other ways of thinking about temporal relationships in terms of spatial ones (for a discussion of these see Johansson Falck, 2015).

Some of the *on* instances that are not explicable in terms of the size of a unit of time landmark appear related to the relationship between foundations, or grounds, and the things that they support. Similar to the ways in which these are typically located underneath the object that they support, temporal concepts referred to as bases are located underneath the actions connected with them (we do things e.g. *on a daily, biennial, or 2-3 year basis*).

Some of the temporal *in* instances that do not appear related to the size of the unit of time landmark appear related to a tendency to construe abstract concepts such as *future* and *advance* as rooms or containers. By thinking of them in this way, it becomes possible for us to furnish them with people, events, activities and processes taking place in them when we, for example, do and experience things *in the future*, or *in advance*. Explanations such as these (for a more detailed discussion of spatiotemporal *in* and *on* instances see Johansson Falck, 2015), may not be as general as those related to the size of the unit of time landmarks involved. Still similar to these, they allow the learner to think about temporal relationships in terms of spatial ones, and the patterns to be both be illustrated and visualized.

Temporal *in* and *on* from a Swedish L2 perspective
Not only the patterns of the L2, however, influence L2 learning, so do those of the learners’ first language (L1) (Odlin, 1989). Given the similarities between English and Swedish (Johansson Falck, under review a), Swedish L2 learners may find it fairly easy to learn to associate large size and temporal abstract nouns with container-like relationships (those construed with *in*), and days with contact/support relationships (those construed with *on*). All these patterns are reflected in Swedish too, for example, speakers of Swedish also do things *på torsdag* (*on Thursday*), *i januari* (*in January*), and *i pausen* (*in the break*). Swedish L2 learners, however, need to be careful not to use English *on* constructions too often. As is coherent with a Swedish tendency to do things on things, for example: *titta på någonting* (*look on something* instead of *look at*), units of time are often cast this way in Swedish. For example: Swedes do things *gång på gång* (*time on time* instead of *time after time*). Moreover, Swedish construes units of time as objects/supporting surfaces to communicate how long a given temporal unit lasts, for example: *ett samtal på fem minuter* (*a talk on five minutes* instead of saying *for five minutes*); how long it will take before a given result has been reached, for example: *hon är här på en kvart* (*she is here on a quarter instead of in 15 minutes*); how much time has passed
since something happened, for example: *har inte träffats på 5 minuter* (has/have not met/seen each other on 5 minutes instead of in 5 minutes), and to state when something typically happens, for example: *på eftermiddagarna* (on the afternoons instead of in the afternoons) (see Johansson Falck, under review a). Some of these patterns exist in English too. However, a major difference between the languages is that the tendency to talk about units of time as if they were objects upon which we do things appears much less restricted in Swedish than in English. In turn, the differences in how widely applicable this way of thinking about time is in the two languages means that L1 speakers of Swedish, as a result of negative transfer, run the risk of overusing temporal on constructions when speaking English.

**Discussion**

The CL view that language is symbolic and reflects thought has several implications for L2 teaching and learning. Not only does it highlight the fact that language is a tool for expressing meaning, it offers an exciting way for teachers and learners to think about the L2 and its speakers. Given that there is not a one-to-one correspondence between language and thought (cf. Sperber and Wilson, 1995: 231-232, Johansson Falck, 2005: 21-22) and that different languages solve the issue of filling the gap between language and thought in different ways, learning an L2 means getting to know how meaning can also be construed, if seen from another perspective. Accordingly, L2 learning may be seen not simply as a matter of conquering a foreign system with a number of peculiar rules, or as a way of learning through rich input, but as a way of getting a glimpse of another perspective on reality that is intimately connected with the speakers of an L2, with their cultures, and with their worlds.

In this chapter, I focussed on some temporal *in* and *on* instances, and how these could be explained in terms of the specific scenes that these instances construe. When applied to practice in the language classroom explanations such as these could easily be turned into various types of visuals (e.g. iconic or schematic images), and the illustrations discussed in relation to the specific scenes that they construe. Achard (2008), for example, reports on having successfully taught syntactic constructions by asking learners to consider how constructions structure specific scenes. In this way, constructions might get easier to imagine, easier to remember and easier to relate to one’s own experiences.

Moreover, teaching temporal instances of prepositions based on explanations that relate time to the basic spatial meaning of the prepositions promises to have a positive effect on learning. Several studies show that making learners aware of the basic spatial meaning of a word significantly facilitates their learning of extended meanings (e.g. Verspoor and Lowie, 2003; Csábi, 2004).

**Conclusion**

This chapter focussed on a CL analysis of temporal *in* and on instances and how these might be explained in terms of a match between form and meaning. It was argued that the theoretical framework of cognitive linguistics provides useful didactic information for practice in second language teaching and learning. By considering how constructions might have been motivated not only by people’s experiences of language, but also by their experiences of
the world around them CL offers a way of thinking about language that learners can relate to regardless of their language background. Moreover, it offers a principled way of thinking about language that may be used for making the teaching and learning of L2 constructions more systematic.

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