

Towards a domain-neutral prepositional semantics

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Abstract

Prepositions with a range over several conceptual domains are often described as polysemous between these domains. Typically, spatial senses are seen as basic, while temporal and abstract senses are assumed to be derived from space. The present article argues in favour of an alternative analysis in which domain-neutral properties of prepositions are used to account for similarities between instances in different domains. Methodological considerations with respect to the analytical depth, generality and simplicity of semantic accounts speak in favour of such a domain-neutral approach. The approach is illustrated with two Swedish prepositions, *från* 'from' and *till* 'to', both of which span numerous domains. To facilitate semantic descriptions of the relation between domain-neutral and domain-specific content, a semantic notation in the form of feature structures is introduced

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1. INTRODUCTION

The domain of space enjoys a privileged status in semantics, especially so in prepositional semantics, where spatial uses of prepositions tend to be the focus of investigation. Coupled with this focus on space is often the claim that spatial language forms the basis for non-spatial language. This *localist* theory is espoused in various schools of semantics, and most strongly so in cognitive linguistics (e.g. [Lakoff and Johnson, 1980](#); [Lakoff, 1987](#); [Talmy, 2000a](#); [Talmy, 2000b](#); [Tyler and Evans, 2003](#); [Chilton, 2014](#)). Model-theoretic semantics has no dominant and explicit theory on the matter (e.g. [Piñón et al., 1993](#); [Zwarts, 2005](#); [Zwarts, 2017](#)), but the preferential treatment given to space sometimes indicates an implicit support for localism. [Kracht \(2020\)](#), working within this tradition, explicitly embraces localist views. Generative grammar displays a similar tendency in some of its semantic endeavours, giving special attention to spatial prepositions while apparently assuming that they form a class in themselves (e.g. [Asbury et al., 2008](#); [Pantcheva, 2011](#)). Conceptual semantics also shows some support for localism, although the framework is more ambivalent. While it grants a privileged position to space, it avoids deriving non-spatial meaning from spatial meaning, favouring instead general schemas that apply to both spatial and non-spatial domains ([Jackendoff et al., 1978](#); [Jackendoff, 1983](#); [Jackendoff, 1990](#);

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Jackendoff, 2002). Not all of semantics aligns with this localist current, but it seems a fair assessment that localism has come to serve as the default position in important parts of contemporary semantics.¹

The present article argues that there is a feasible but underdeveloped alternative to the localist focus on space – *domain-neutral semantics*. For practical reasons, the article focuses on prepositional semantics, but the basic principles and motivations, to be elaborated in the course of the article, apply to the whole of semantics. The domain-neutral approach to semantics challenges the assumption that language must align, more or less congruently, with conceptual distinctions that are prominent in thought, suggesting instead that such distinctions can sometimes be subsumed under domain-neutral categories. It thus investigates possible generalisations that are overlooked in spatial semantics. Its basic thesis with respect to prepositional semantics is that some prepositions encode abstract, domain-neutral features. Such features carry no domain-specific information. Instead, they provide schematic information that may be interpreted by specialised, conceptual systems. For instance, an English preposition like *to* – often described as a predominantly spatial preposition – would be assumed to contain no specific information with respect to paths in space. The spatial interpretation arises through interaction with a spatial conceptual system.

The choice between domain-neutrality and domain-specificity touches on many issues in semantics, but most importantly on how to delimit meanings. How to properly circumscribe and separate meanings from each other has been a perennial issue in semantics, with a literature that spans over centuries. In prepositional semantics alone, the literature is substantial (e.g., Brøndal, 1940; Benveniste, 1949; Bennett, 1975; Waugh, 1976; Lakoff, 1987; Hottenroth, 1993; Tyler and Evans, 2003; Reid, 2004; Van der Gucht et al., 2007; Hewson and Bubenik, 2006; Tobin, 2008; De Cuypere, 2013; Widoff, 2021; Widoff, 2023; Brenda and Mazurkiewicz-Sokolowska, 2022). The present article contributes to a possible resolution of the issue by dismissing a particular constraint on the delimitation of meanings. The proposal is that meanings do not have to be circumscribed along the lines of conceptual domains, or differently put, that there need not be a general constraint against meanings running across domain lines. If this proposal is accepted, semantic analysis is afforded possible delimitations from which it would otherwise be barred.

The aims of the article are 1) to demonstrate this approach on linguistic data, 2) to provide it with further theoretical justification, and 3) to develop a basic notation suitable for its needs. For empirical demonstrations, the article concentrates on two prepositions in contemporary Swedish, *från* 'from' and *till* 'to'. These prepositions were selected because they form a symmetrical pair, range over many domains and exhibit similarities between these domains. They are also not overly idiosyncratic in their usage, which allows us to focus on the issue at hand without having to contend with an array of irregular and lexicalised patterns of usage.

The next section provides a brief research background and clarifies a few preliminary issues of conceptual nature. Section 3 continues with a discussion of *från* and *till*, where it is argued that the prepositions do not encode a spatial notion of paths. The data from this section provides an empirical basis for pursuing a domain-neutral account. Section 4 discusses a few methodological issues and proposes four principles to be followed in semantic analysis. The discussion in this section provides further theoretical justification for pursuing domain-neutral accounts. Section 5 and 6 deal with the semantic structures of *från* and *till*, especially with how these structures can be articulated in a notation able to express semantic content at different levels of abstraction. Section 7 discusses the interpretation of sequences in different domains.

2. PRELIMINARIES

Semantic inquiry as pursued in the present article is concerned with the conceptual content of linguistic expressions as seen from a synchronic point of view. This content is taken to be internal to cognitive and linguistic systems. The semantic values of linguistic expressions are hence seen as intensional without any immediate reference to real world objects. The investigation targets such content at a structural, systemic level of organisation, as opposed to the on-line interpretation of expressions in actual discourse; neither is it concerned with the acquisition of meaning, nor with diachronic processes of meaning formation. This approach follows a well-established mode of linguistic analysis found in frameworks as different as structural semantics (e.g. Coseriu and Geckeler, 1981; Greimas, 1984), conceptual semantics (Jackendoff, 1983; Jackendoff, 1990; Jackendoff, 2002) and cognitive semantics (Talmy, 2000a; Talmy, 2000b). The purpose of semantic descriptions in such frameworks, including those in the present study, is to account for the distribution and interpretation of linguistic expressions.

A domain-neutral approach requires that semantic content be divided into at least two levels: a level of general content that is encoded in the lexicon and grammar of a language and a level of specific content that emerges in contextual interpretations. As an alternative to the informal expressions *meanings* and *senses*, I shall call the content of these

¹ See Fortis (2018, 2020) for a review of the tradition of localist thought and its reemergence in modern linguistics. Also Bortone (2010) provides an illuminating discussion of the literature.

levels *sememes* and *allosemes*. These terms, as should be expected, refer to a hierarchical order of content in which sememes subsume allosemes, but they will not, against another common assumption, be defined with respect to the morphosyntactic composition of the corresponding expressions. They will have no segmental definition. Several sememes can thus combine to form another sememe. This definition is a practical choice, since a concept incorporating morphology (for instance, *sememe* = the meaning of a morpheme, as in Bloomfield, 1933, 162, or *sememe* = the set of semes that corresponds to a moneme, as in Pottier, 1963, 14f and Pottier, 1964, 124f) is of little use for the current purposes. It also seems superfluous, provided that morphology can handle segmentation into morphemes.²

On the present approach, then, a sememe is the general, encoded content of a linguistic expression, while an allo-seme is a specific content that is subsumed under a sememe. The relationship of subsumption is understood in the sense that 1) the semantic information of the sememe is a subset of the semantic information of the allo-seme, and that 2) the extra information of the allo-seme is contextually conditioned. Allosemes arise from the interpretation of combinations of sememes. For instance, English *between* may be hypothesised to have a sememe that subsumes domain-specific allosemes, two of which are shown in (1). The spatial interpretation in (1a) and the temporal interpretation in (1b) derive from the immediate linguistic contexts. The domain-neutral approach suggests that such contexts activate conceptual systems that provide the expressions with appropriate interpretations – that is, the allosemes are specified from a sememe. Whenever analogous uses of one and the same form are encountered in different domains, the domain-neutral approach pursues such generalisations over domains. This mode of analysis contrasts with an analysis in terms of polysemy, according to which the context prompts the selection of an appropriate sememe (from a list in the lexicon) rather than of an appropriate interpretation within the bounds of a sememe.

- (1) a. between here and there
b. between now and then

The leading idea of the domain-neutral approach is not that all prepositions are domain-neutral in this way; it is that prepositions with uses in several domains should be investigated with respect to possible domain-neutral properties. The Swedish preposition *tills* ‘until’, for example, has only temporal uses and can conceivably not be anything but domain-specific. The same holds for *until* in most varieties of English. Important evidence for domain-neutral properties is analogies between domains, as these suggest regularities at a higher level of abstraction.

The notion of domains (or fields) is based on perceived similarities and differences between contents of thought. A domain is a region of meaning that forms a coherent whole. When a content falls under a domain, it follows similar patterns of interpretation and adheres to similar constraints as other members of the same domain. It is the presence and absence of such affinities that suggest distinctions between domains: phenomena of space behave one way, phenomena of time in another, phenomena of possession in a third, and so on.

It is often recognised that domains may contain subordinate domains (e.g. Langacker, 1987; Gärdenfors, 2014). If there is a domain of possession, for instance, it clearly breaks down into different kinds of possession (cf. Jackendoff, 1983, 191, who speaks of a “family of semantic fields”, which perhaps is a weaker statement). There is alienable possession, as in the possession of one’s shoes, and there is inalienable possession, as in the possession of one’s feet. There are also kinds (or perhaps degrees) of alienable possession: ownership on a statutory or customary basis can be distinguished from merely exercising control over an object. As we delve into the minutiae of these subdomains, further distinctions can be made. Similarly, it can be useful to distinguish between different kinds of spatial relations expressed by prepositions. Commonly recognised types are topological relations (e.g. *at*, *on*, *in*), projective relations (e.g. *over*, *under*, *next to*) and directional relations (e.g. *from*, *to*, *towards*) (Zwarts, 2017). The spatial domain can thus be divided into subdomains encompassing different classes of spatial relations.

Subdomains raise the question of what is to count as a domain-neutral content. A notion that qualifies anything ranging over the most subtle conceptual differences is not useful. The point is to pursue generalisations over significant differences. As a simple heuristic, I will consider a content domain-neutral if 1) it ranges over both space and time, or if 2) it ranges over space or time and some other domain, whatever it may be. For the cases considered in the present article, this will suffice. For some other cases, not investigated here, a more sophisticated set of criteria will likely be needed.

The domain-neutral approach assumes that language enjoys a significant degree of conceptual autonomy; it pursues generalisations over domains; and it suggests that the semantic content of linguistic expressions be divided into at least two levels. These are by no means novel themes in linguistics, although they do not characterise dominant trends in

² The reader will be reminded that *sememe* has been given several incompatible definitions throughout the years (Vakulenko, 2005). Noreen (1901), who was the first to use the term, put no restriction on the length of a sememe.

contemporary semantics. Lack of space precludes a detailed overview of the literature. Only three noteworthy precursors shall, for the sake of comparison, be mentioned here.

The autonomy of linguistic meaning has always been a central principle in structural semantics, deriving from (Saussure's 2011) concept of the linguistic sign. This tradition has accordingly produced a number of domain-neutral accounts of prepositions, ranging from the grandiose theory of Brøndal (1940) to case studies of one or a few prepositions (e.g. Benveniste, 1949; Coseriu, 1970; Coseriu, 1987; Waugh, 1976; Van der Gucht et al., 2007; Tobin, 2008; De Cuyper, 2013). Given the time-frame, however, the production is pretty meagre, the empirical coverage limited and the theoretical development wanting. It is hard to find any lasting innovations with respect to prepositions. One limiting factor has arguably been a programmatic notion of meaning that has led to a preoccupation with monosemy. In previous work, I have argued that there is no successful account of prepositions that adheres to the ideal notion of general meanings as formulated in structural linguistics. There are always deviations from the espoused ideals of such meanings. As a remedy, I propose that the requirement of monosemy be abandoned, since monosemy sets prohibiting high demands on research that risk hampering progress (Widoff, 2023). For this reason, it is important not to conflate domain-neutrality with monosemy. The domain-neutral approach advocated in the present work promotes generalisations over uses and domains, but it does so without the assumption that such generalisations yield monosemous results. The circumstance that a sememe spans over several domains does not guarantee that there is only one sememe in each domain. It is entirely possible for prepositions to have several domain-neutral sememes.

The stratified structure characteristic of structural semantics (and which is also presupposed in a domain-neutral approach) has been elaborated into a kindred bipartition in so called two-level semantics. Operating with a distinction between *semantic forms* and *conceptual structures*, its proponents suggest that semantic representations should be divided into "context-free lexical meanings" and "contextually specified (parts of) utterance meanings" (Lang and Maienborn, 2019, 118). The former are linguistic in origin, while the latter derive from non-linguistic mental systems. The relationship between them is one of underspecification and enrichment: semantic forms provide schematic grammatical and semantic information that is elaborated into conceptual structures. Although two-level semantics emphasises the invariance of semantic forms with respect to conceptual structures, its contributions to prepositional semantics have been confined to spatial semantics. It has yet to examine domain-neutral properties of prepositional meaning (e.g. Bierwisch, 1988; Bierwisch, 1996; Herweg, 1989; Lang, 1993; Kaufmann, 1993; Hottenroth, 1993). How the framework would handle the endeavour of a domain-neutral prepositional semantics is unclear.

Conceptual semantics assumes an intermediate position with respect to localism and domain-neutrality, as mentioned above. It submits that there are "abstract underlying conceptual patterns that can be applied to many different semantic fields" (Jackendoff, 2002, 358), hence recognising some domain-neutral properties of linguistic meaning. In opposition to the common practice in cognitive linguistics, it prefers not to analyse "cross-field parallels" as derived from a primary field, suggesting instead that they are "instantiations of a more abstract schema" (Jackendoff, 2002, 359; see also Jackendoff, 1976; Jackendoff, 1983). But in accordance with localism, conceptual semantics grants a certain degree of primacy to the spatial domain (Jackendoff, 2002, 358), and despite its commitment to generalisations, it operates with one level of content, deeming multiple levels unnecessary (Jackendoff, 2011). It thus lacks a domain-neutral level of lexical description. Instead, it assumes that there are distinct fields in which the same abstract schema may be instantiated, and such instantiations are generally taken to be polysemous between fields (Jackendoff, 2002, 359). The default position of the domain-neutral approach, by contrast, is that analogous uses of the same form in different domains are attributable to a single sememe. While both modes of description achieve generalisations over domains, the sememe-centred mode of descriptions makes the generalisations more explicit and more well-integrated into lexical analysis.

In brief, the domain-neutral approach advanced in the present work is characterised by three propositions setting it apart from other frameworks: a) sememes of prepositions can range over many domains, b) domain-neutrality does not entail monosemy, and c) analogous uses in different domains stem from a common sememe.

3. EVIDENCE FROM SWEDISH – FRÅN AND TILL

Previous work in spatial semantics suggests that dynamic prepositions, such as English *from*, *to*, *onto* and *into*, are correlated with static prepositions, such as *at*, *on* and *in*. The latter denote configurations that occur at some point of the paths denoted by the former: *from* and *to* correspond to *at*, while *onto* and *into* correspond to *on* and *in*, respectively. Correspondences of this sort are generally taken to be cross-linguistically valid, if not universal (Bennett, 1975; Jackendoff, 1983; Jackendoff, 1991; Asher and Sablayrolles, 1995; Kracht, 2002; Zwarts, 2005; Pantcheva, 2011).

What to make of the proposed correspondence for *from* and *to* depends on the analysis of *at*. According to Zwarts and Winter (2000), *at* denotes a space external to an object, as opposed to *in*, which denotes a space internal to an object. Kracht (2020, 6), in a similar vein, writes that *at* requires the objects of the relation to be disjoint.

According to [Bennett \(1975\)](#), *at* is neutral in this regard and a hypernym of both *on* and *in*. [Lindstromberg's \(1998, 165\)](#) and [Dixon's \(2021, 167f\)](#) general surveys of English prepositions agree with Bennett's analysis. It seems quite clear that the former description, which suggests a narrow meaning for *at*, is inadequate and has failed to properly consider the use of the preposition and the structure of the paradigm. It is correct that *at* sometimes receives an external interpretation in opposition to *on* and *in*, but it can also cover the semantic area of all three prepositions, that is, the opposition between *at* and the other two prepositions can be neutralised. The former is seen in (2a), where the interpretation NOT-ON & NOT-IN is strongly implied, and the latter in (2b), where the event could take place indoors or outdoors alike, quite possibly even on both places at once.

- (2) a. They sat at the wall.
b. They met at his house.

Something similar holds for Swedish *från* 'from' and *till* 'to'. Both prepositions are neutral to the distinction between proximal localisation (*near*) and direct localisation (*on, in*), while either interpretation may be strongly favoured in a context. I shall call this neutral configuration COINCIDENCE. For (3a), the favoured interpretation is proximal, and for (3b), it is direct. In other words, the people did probably not drive their vehicle all the way into the store, while they most likely passed the border into Denmark. Highly specific knowledge of the world, such as knowledge of the layout of stores and of people's travel patterns, accounts for the variation.

- (3) a. De körde till butiken.
they drove to store:DEF
'They drove to the store.'
b. De körde till Danmark.
they drove to Denmark
'They drove to Denmark.'

In most sentences with motions verbs, such as those in (3a), paths are an important part of the interpretation. Many previous analyses of dynamic prepositions, like *från* and *till*, have seized upon this fact, concluding that paths are inherent in the meaning of the prepositions (e.g. [Jackendoff, 1983](#); [Jackendoff, 1990](#); [Jackendoff, 1991](#); [Piñón et al., 1993](#); [Lindstromberg, 1998](#); [Wendt, 2003](#); [Zwarts, 2005](#); [Pantcheva, 2011](#); [Brenda and Mazurkiewicz-Sokolowska, 2022](#)).³ [Tyler and Evans \(2003, 2004\)](#) stand out by excluding paths from the encoded meaning of English *to*, arguing that the presence of paths and motion is derived in the sentential context: "both path and motion, as we have defined them, are the result of conceptual integration of linguistic prompts, and are not primarily coded by *to*" (2003, 150). [De Cuyper \(2013\)](#) goes further by also excluding any reference to space for the same preposition, arguing that the assumption of a spatial core meaning, to which Tyler and Evans adhere, constitutes a methodological bias: "the spatial goal reading is additionally excluded based on the same grounds that Tyler and Evans used to remove the sense of motion from the core meaning" (133).⁴ [Brenda and Mazurkiewicz-Sokolowska \(2022\)](#) represent the more common approach, describing English *to*, German *zu*, Polish *do* and Russian *к* as encoding paths. In their analysis, these prepositions are profusely polysemous.

To avoid collapsing sememes and alloemes into one category, proper care must be taken to separate the semantic contribution of prepositions from that of verbs occurring with prepositions in sentences. When such care is taken, there is reason to doubt that paths are inherent in *från* and *till*. Since both *från* and *till* tend to be dynamic, it seems undeniable that they encode some kind of transition, but this may not be a path in the sense of a sequence of positions in space that an object can traverse. That particular interpretation may arise on other grounds. The following examination of *från* and *till* provides reasons for adopting a more minimal semantic description. This description, it will be recalled, concerns the synchronic state of the two prepositions.

Evidence against the assumption that *från* encodes a path comes from sentences with verbs that express a change of location in an atypical or inconsistent way. One case in point is *avlägsna* 'remove'. Sometimes the verb expresses a

³ In some definitions, paths encompass full trajectories, while in others, they are circumscribed to parts of trajectories, such as beginning, middle and end (see [Zlatev, 2007](#), for a discussion). The difference does not bear directly on the choice between domain-specific and domain-neutral accounts of prepositions. I use *path* for sequences in space that an object can traverse, whether based on full or partial trajectories.

⁴ For a discussion of the particulars of De Cuyper's analysis, see [Widoff \(2023\)](#).

path, as exemplified in (4a). For conceptual reasons, the person being removed must traverse a distance away from the site, following a path. But such an interpretation is not always necessary or even possible. In (4b), stains are at the textiles and then stains are not at the textiles – not because the stains have moved somewhere else, but because they have ceased to be. Of course, one could argue that the particles of which stains consist move in the process, but the stains as such do not move, because they cease to be as the particles move away. Hence, there is no discernible path with respect to the designated object. A perhaps clearer example, where there is no associated movement at all, is shown in (4c). Here the removed thing is hair growth, a process that certainly has not been made to move somewhere else through the laser treatment. There is only a sequence of coincidence and non-coincidence.

- (4) a. Polisen avlägsnade en stökig person från platsen.
 police:DEF removed a unruly person from place:DEF
 ‘The police removed an unruly person from the site.’
 b. Medlet avlägsnar svåra fläckar från textilier.
 means:DEF remove difficult stains from textiles
 ‘The substance removes difficult stains from textiles.’
 c. Laser kan användas för att permanent avlägsna oönskad hårväxt från kroppen.
 laser can use:PASS in.order.to permanently remove unwanted hair.growth from body:DEF
 ‘Laser can be used in order to permanently remove unwanted hair growth from the body.’

The particular effect observed in (4b) and (4c) is due to the verb. *Avlägsna* ‘remove’ pertains more to the act of making something disappear than it does to the act of making something move. The difference between (4a) and (4b)–(4c) lies in disappearing from one location and appearing at another, in which case there is a path, and disappearing altogether, in which case there is none. *Avlägsna* is not a typical motion verb. For most motion verbs, it is hard to find situations in which there is no path, because paths tend to be inferred when objects move in space. For verbs expressing manner of motion, the association with paths appears to be particularly strong, presumably because the manner of motion is conceptualised as being performed along a path. The exceptions are rare and restricted to highly particular contexts.⁵ Activities like crawling, walking, running and flying therefore strongly evoke the presence of a path. For some other verbs and phrases, where there is a transition but no particular manner, the connection is a bit weaker, as we will see in a moment.

Even when a path is almost invariably inferred, the inference may not be necessary. This can be seen from juxtaposing certain verbs that normally involve paths with a verb that encodes the absence of a path and for which the inference therefore cannot occur. The latter holds for *teleportera* ‘teleport’. The verb encodes a change of location that contravenes both our everyday experience and the current scientific understanding of physics. In spite of this apparent incompatibility with the concept of space, it can be imagined, and it has indeed been imagined to the point of becoming part of common vocabulary. If paths were an encoded feature of *från* and *till*, one would expect them to be incompatible with *teleportera*, but as can be seen from (5a), they are in fact compatible. We can now observe that a verb such as *förflytta* ‘move’ may be used for the very same situation. In (5b), it acts as an hypernym to *teleportera*. Other expressions behaving the same way are *avlägsna* ‘remove’, *byta plats* ‘change place’ and *flytta* ‘move’. Since these expressions can substitute for *teleportera*, it seems that we should be wary of discounting *teleportera* as an outlandish, fantastic exception. If that were the case, we would expect other verbs to be incompatible with it. The conclusion is that none of these

⁵ In the context of physical exercise, verbs for running, walking and the like are sometimes used for movements performed on the spot.

expressions require a path, although under most circumstances a path would be inferred. By contrast, manner of motion verbs such as *flyga* ‘fly’ and *springa* ‘run’ are incompatible with *teleportera*, as shown in (5c).⁶

- (5) a. Han teleporterades från en plats till en annan.
 he teleported:PASS from one place to an other
 ‘He was teleported from one place to another.’
- b. Han förflyttades från en plats till en annan (genom teleportation).
 he moved:PASS from one place to an other through teleportation
 ‘He was moved from one place to another (through teleportation).’
- c. #Han {flog/ sprang} från en plats till en annan genom teleportation.
 he flew/ ran from one place to an other through teleportation
 ‘He {flew/ ran} from one place to another through teleportation.’

The absence of paths in (4b), (4c), (5a) and (5b) suggests that *från* and *till* are underspecified with respect to paths. The paths observed in (3a), (3b) and (4a) do not inhere in the sememes. They arise from conceptual inferences made in the context of each sentence. What remains constant throughout (3), (4) and (5) is something different and less specific, namely a sequence of two conditions. For *från*, there is a coincidence that precedes a non-coincidence (the Figure is at the Ground; the Figure is not at the Ground), and for *till*, there is coincidence that succeeds a non-coincidence (the Figure is not at the Ground; the Figure is at the Ground). Between the two conditions there may be a path, but this is contingent on the context.⁷

Further evidence for this description comes from phrases taken in isolation from verbal contexts. Consider the phrases in (6), where the head of the NP denotes a part and the complement of the PP denotes a whole. In some situations, these phrases may be equivalent in the sense that they could refer to the same state of affairs (see Widoff, 2022, on equivalence). The difference between them then lies in which aspect of the relationship is highlighted. With *från*, the origin of the part – where it comes from – is put at the forefront, and with *till*, the purpose of the part – where it is supposed to go – is instead brought to the fore. *Av* ‘of’ is neutral in this regard and merely expresses the parthood relationship. We saw above that verbs play an important role in the manifestation of paths, and that *från* and *till* lack paths with some verbs. On the basis of this observation, it is reasonable to conclude that the absence of verbs leaves the presence of paths indeterminate. Unlike *av*, *från* and *till* both express a sequence of coincidence and non-coincidence, but there is no expression of any movement along a path. *Från* simply expresses that the part, at some point, was at the whole, and *till* expresses that the part, at some point, may come to be at the whole.

- (6) a. en del från bilen
 a part from car:DEF
 ‘a part from the car’
- b. en del till bilen
 a part to car:DEF
 ‘a part for the car’
- c. en del av bilen
 a part of car:DEF
 ‘a part of the car’

⁶ A reviewer objects to the invocation of an unusual verb such as *teleportera*. I assume some readers may have the same reaction. The objection would seem to rely on the assumption that linguistic items change meaning and behaviour in the surroundings of unusual items. This is of course possible and may be the only reasonable solution in some cases. I still believe, though, that it is preferable, for general methodological reasons, to persist in the assumption that things remain the same. Otherwise, we are allowed a powerful way to reject evidence against previously proposed analyses by suggesting that some variation has occurred, making the cases from which new evidence is drawn incomparable to previously studied cases. Invariance is a constraint that ensures the possibility of falsification. This assumption is also in line with a compositional view of semantics. Moreover, the circumstance that teleportation is impossible does not bear strongly on the issue, in my view. I see it as a revealing fact about language that it readily accommodates such a verb. Note that the verb by no means is limited to specialised genres; it has found its way into common discourse. I take all this to show that language enjoys a high degree of conceptual autonomy and that linguistic meaning is a unique form of conceptualisation.

⁷ In some accounts, this kind of structure is reflected by descriptions of similar prepositions as being *coinitial* and *cofinal* (e.g. Kracht 2000, Pantcheva 2011). But these accounts assume that such prepositions encode paths.

Closer examination of these phrases reveals that they actually straddle two domains. They involve physical objects, which makes them spatial, but they also involve parts and wholes, which makes them meronomic. The spatial domain intersects with the meronomic domain, but the latter exceeds the former in the important respect that it also includes temporal and abstract objects. Because of its general character, the meronomic domain does not in itself contain spatial notions such as paths and locations. This implies that the notion of coincidence requires a more general interpretation – one that is not based on locations – in order to accommodate the meronomic domain. The domain-neutral approach provides a straightforward solution to such cases where more than one domain is involved.

From (6) in isolation, all of this is not entirely obvious, because the phrases already have spatial interpretations that may seem sufficient in themselves. But if we consider abstract counterparts, such as those in (7), the need for a general notion of parts that also encompasses abstract domains becomes more apparent.

- (7) a. ett kapitel från boken
 a chapter from book:DEF
 ‘a chapter from the book’
 b. ett kapitel till boken
 a chapter to book:DEF
 ‘a chapter for the book’
 c. ett kapitel av boken
 a chapter of book:DEF
 ‘a chapter of the book’

Under an abstract interpretation of (7), according to which the books and chapters are abstract objects, there is no coincidence in terms of space.⁸ Yet, the phrases in (7) exhibit contrasts similar to those in (6): (7a) highlights the origin of the part, (7b) highlights the purpose of the part, and (7c) expresses only the parthood relationship. In (7), coincidence is interpreted as being in the immediate context of the whole as opposed to some detached context, in which the part is less integrated with the whole. The latter kind of context could be the reading of a single chapter from a book (with *från*) or the writing of a chapter before the completion of a book (with *till*). The distinction appears to be solely a matter of praxis, derived from the activities and perspectives in our human interactions with books. There is no particular spatial manifestation correlated with either one of the two situations. Although the specific conceptual content is different, the parallels between (6) and (7) suggest a common, domain-neutral sememe.

Different domains may afford different interpretations, leading to inconsistencies between domains. The activation of multiple domains can therefore have important semantic consequences. Consider the sentence in (8). The presence of a path depends on the domain the sentence is assigned to, and it appears that it must in fact be assigned to two domains. To the extent that the sentence pertains to space, the line of sight – i.e. “an intangible line emerging from the visual apparatus” (Talmy, 2000a, 110) – forms the basis for a path under normal circumstances. As the gaze moves, the line of sight tracks a path in space. To the extent that the sentence pertains to attention, on the other hand, no such inference is warranted. Gaze shifts tend to be saccadic and erratic, so the attention may not run along a path in such a smooth way. It could just as well skip from one thing to another, hopping between discontinuous regions of space. Such a transition cannot be described as a path.

- (8) Han vände blicken från scenen.
 he turned gaze:DEF from scene:DEF
 ‘He turned his gaze from the scene.’

The duality of (8) derives from *blicken* ‘the gaze’, a noun denoting visual attention, i.e. a certain kind of perception focused in space. It seems inevitable that such a noun evokes both domains. In the present case, the duality carries over to the preposition as well.

The most interesting thing about (8) is the incongruity between features present in the same alloeme. The expression combines two domains that afford different interpretations with respect to the transition. This lack of agreement indicates that there should be a general, domain-neutral content that accommodates both interpretations. The only alternative would be to assume that there is a non-monotonic process of modification, in which some of the features

⁸ There is also a concrete interpretation of (7), in which part and whole are understood to be concrete objects.

of the sememe are altered in order to fit one specific aspect of the interpretation. This, however, is a rather unconstrained mode of analysis without clear boundaries. It is more principled and constrained to assume that all allosemantic features are compatible with the sememic features of the preposition (see Section 4 for further discussion of this methodological consideration).

Evidence in favour of a domain-neutral account also comes from sentences expressing a change of state. In (9), the light changes from the state of being blue to the state of being green. The event takes place in space, but there can be no path, because there is no motion.

- (9) Ljuset växlar från blått till grönt.
 light:DEF switch from blue:N to green:N
 ‘The light changes from blue to green.’

The overlap between prepositions used in motion events and prepositions used in change of state events is of course well-known (e.g. Gruber, 1965; Jackendoff et al., 1978; Jackendoff, 1983), but localist accounts see changes of state as derived from motion (e.g. Talmy, 2000b, 237–247; Chilton, 2014). From this point of view, (9) may contain a path in a metaphorical or extended sense. Talmy (2000a,b) does not offer much of an explanation for the derivation, but Chilton (2014, 69) provides the following one:

Motion takes place over time, but if the spatial dimension is removed, if that is imaginable, the passage from ‘place’ to ‘place’ happens over time but on the spot: going from, say, Manchester to London would constitute Manchester changing into London – certainly a change of state.

The details of how this is supposed to work is left unexplained. One could possibly imagine that motion contains two components – change of location and change of state – so that when the former is removed, only the latter remains. But such an analysis undermines the alleged derivation, because both components are present from the start. It is of course questionable if motion really involves a change of state, since this means a change in a particular object, and it is unclear what that object would be in Chilton’s example. A change of location may very well be accompanied by changes of different sorts (for instance, a change in what appears in the field of vision of a traveller), but how these changes transform into a change of state is left without explanation, and there is no obvious solution. Regardless of the precise explanation given, the basic problem with the suggested derivation is arguably that it runs counter to good analytical practice: it purports to derive the simpler concept (change) from the more complex concept (motion). The former is inherent in the latter. The latter is not inherent in the former.

The semantic patterns that have been observed above suggest two minimal sememes for *från* and *till*. The prepositions do not encode paths. They encode sequences of two conditions. If the configuration is *coincidence*, then *från* encodes a coincidence (c) that precedes a non-coincidence (–c), and *till* encodes a coincidence that succeeds a non-coincidence. As expected, one is the converse of the other, reflecting the common distinction between source and goal prepositions. A preliminary formulation of these sememic features are shown in (10). The tuples are here interpreted as sequences. A refinement of this analysis will be presented in Section 5.

- (10) a. $\llbracket \text{från} \rrbracket = (c, -c)$
 b. $\llbracket \text{till} \rrbracket = (-c, c)$

By removing the notion of paths from the meaning of the prepositions, it becomes possible to adopt a semantic description schematic enough to afford non-spatial interpretations that are not derived from a primary spatial meaning. Coincidence is then understood as a domain-neutral condition of agreement or correspondence for which the prepositions encode converse orders of satisfaction. This configuration naturally has different realisations corresponding to ontological differences between domains. For spatial uses, as in (3a) above, coincidence means to be localised at the same place. For temporal uses as in (11a), coincidence means to take place at the same time. For possessive use as in (11b), coincidence means to be owned by or within the sphere of influence of a possessor. For a change of state, as in (11c), coincidence means agreement between two categorisations, and in (11d), it means the presence of a property in a thing. From a domain-specific point of view, these uses are distinct and independently structured. From a generalising, domain-neutral point of view, on the other hand, they are all variations on the same theme.

- (11) a. Han arbetar från morgon till kväll.
 he work from morning to evening
 'He works from morning to evening.'
- b. Han stal från de rika och delade ut bytet till de fattiga.
 he stole from the rich and handed out loot:DEF to the poor
 'He stole from the rich and distributed the loot among the poor.'
- c. Rom växte från en liten by till miljonstad.
 Rome grew from a small village to million.city
 'Rome grew from a small village into a city of a million people.'
- d. Han förvandlades från lugn till rasande på ett ögonblick.
 he transformed:PASS from calm to furious on a instant.
 'He turned from calm to furious in an instant.'

The domain-neutral approach advocated in the present study draws on the parallelism and agreement between such varied uses in order to suggest generalisations over domains. There are indications that also some of the inferences needed for domain-specific interpretations have domain-neutral properties. For instance, the inference of a path in some spatial expressions is analogous to the inference of an amount of time passed in (11a) and to the inference of a gradual transformation in (11c). In (11d), on the other hand, there is no gradation, and (9) above is indeterminate on the matter, allowing for either interpretation.

4. RATIONALE FOR A DOMAIN-NEUTRAL SEMANTICS

A domain-neutral approach to semantics endeavours to describe sememes that range over several domains. Such sememes will have to be schematic and do not necessarily conform to delimitations commonly found in perception and thought. They are abstractions performed by language over a substantial conceptual content, relatively free of the particular differences that obtain between domains. It is clearly not the case that all sememes are like this. Certain prepositions are restricted to space, others to time, and still others to a limited range of abstract relations, with no or only marginal uses in other domains. The defining characteristic of the enterprise is therefore not the proposition that all sememes follow the same pattern, but the proposition that domain-neutral sememes are possible and should be pursued when similar uses of a single form are encountered in different domains.

Theories pursuing structures at such an abstract, autonomous level of semantic description tend to be met with two recurring objections. One is that the descriptions fail to predict language use. I have dealt with the issue of prediction elsewhere, arguing that meanings (sememes) all by themselves should not be expected to predict language use with any great precision, because language use is also determined by other factors (Widoff, 2021). De Cuypere (2013) presents a similar argument based on the distinction between language system and normal language use (cf. Hjelmslev, 1942; Coseriu, 1975; Willems, 2022). The general systemic meaning of a lexical item, he argues, should be distinguished from the normal use of that item, which is constrained by additional factors such as default interpretations. Discussing English *to*, he submits that the systemic meaning constrains the use of the preposition, but it does not explain the precise way it is used in all different contexts:

The systemic meaning is never taken to be realized as such, but always in combination with other lexical items, thus giving rise to a set of "normal" uses, which are additionally taken to be included in the linguistic cognition of the speaker. Thus, the English speaker knows that *to* can be used to mark a recipient, to indicate a direction, to point to a certain goal, etc. So although the systemic (instrumental) meaning of *to* is postulated to account for the different uses of *to*, it does not explain all the different uses of *to* (133f).

The other recurring objection is that abstract descriptions somehow elude comprehension. I have also touched on issues of comprehension in another context (Widoff, 2018), but the topic remains somewhat obscure and is prone to lead to confusion, so a few clarifications on the matter are in order.

The strongest objections against abstract meanings exhibiting conceptual autonomy have come from cognitive linguistics. Such meanings deviate from the standards of what its proponents consider to be a normal and appropriate comprehension of linguistic expressions. In order to have a meaning that is common to all related senses of a lexical item, Lakoff writes, one will have to adopt a meaning "so devoid of real meaning that it is not recognizable as what people think of as the meaning of a word" (Lakoff, 1987, 416). Langacker observes that expressions can receive countless

contextual interpretations and argues that these cannot be derived compositionally. A semantics that remains confined to the compositional values of expressions will be dubious, because “the resulting semantics representations will be so limited and impoverished relative to how expressions are actually understood that we would hardly recognize them as reasonable approximations to their meanings” (Langacker, 1988, 17). Discussing prepositions, Evans and Green (2006, 329f) adopt “a single abstract spatial sense” for English *over*, i.e. a sense from which different spatial uses are specified, but they reject the same strategy when other domains are involved, unfortunately without detailed argumentation as to why generalisations over domains are inadmissible. Taylor (2002, 107), also he on the topic of prepositions, notices that a relatively simple expression such as *the football under the table* can correspond to countless spatial scenes. He argues that the variation shows “that it is hardly possible to visualize a football being under a table, in and of itself, divorced from more specific conceptualizations”, apparently assuming that such visualisations bear directly on the structure of linguistic meaning. Through all of these arguments there runs an appeal to common sense understandings of meaning.

It is, of course, commendable to be concerned with the comprehension of linguistic meaning. There can be no doubt that semantics depends on a phenomenology of meaning in the sense that it cannot proceed without the aid of semantic judgements that appear to speakers in conscious experience (Itkonen, 2008; Zlatev, 2008; Widoff, 2018). Comprehension of the material is indispensable. This, however, does not mean that linguistic descriptions must conform to common sense. Linguistic analysis seeks to disclose underlying structures and regularities that are absent in immediate intuitions. In order to do so, it must present us with new concepts, definitions or classifications. It cannot simply traffic in common sense categories – it must add a scientific level of comprehension. References to “what people think of as the meaning of a word” (Lakoff, 1987, 416), to “how expressions are actually understood” (Langacker, 1988, 17), to customary domain divisions (Evans and Green, 2006) and to visualisations accompanying linguistic expressions (Taylor, 2002) do, however, put considerable weight on common sense understandings of linguistic meaning, contrary to the scientific imperative of introducing a new level of comprehension. Without good reason, as far as I can tell, they lock linguistics into a folk psychological model, haplessly prohibiting possible scientific advancement with reference to the prescientific understanding of ordinary speakers. This is an unfortunate epistemology seldom found in other sciences.

It might be that semantics is especially susceptible to this kind of reasoning because of an unusual condition. Semantics finds itself in a particular predicament, as it is unable to escape a peculiar but well-known circle that leads it right back to itself: positing a meaning, however simple and clear, is an act of explication, and in this act, we are left to the resources of our metalanguage, which ultimately is a natural language. Contrary to the familiar hermeneutic sentiment, I do not think one should make too much out of this condition, but it calls for special caution with respect to terminology. There is no reason to believe that our metalanguage has supplied us with words whose ordinary semantic range perfectly fits the semantic objects we are describing. Our terms are in themselves insufficient. There can be no spontaneous, unmediated correspondence between object language and metalanguage. Terms have to be worked out and demonstrated through examples. They aim at a reality; they are not that reality.

So, when *från* and *till* are said to contain a feature “coincidence”, this word is supposed to be suggestive, but it is probably not uniquely suitable for the task. The employment of the word is not an identity statement that – by virtue of our prior understanding of the word – evokes everything we need to know about the feature. Nor does it entail that all instantiations of the feature are paraphrasable by the word in anything like a straightforward manner. This lack of agreement should not be all that surprising, because the same two conditions apply to all non-semantic objects of description, for more obvious reasons. Nevertheless, because of the ontological affinity between object and description in semantics, there is a common expectation that there ought to be a strong agreement between them, somehow brought about in paraphrasing.

The idea that semantic descriptions can substitute for linguistic expressions on the basis of their identity has a long pedigree, going back to at least Leibniz (1969, 1996). Several problems with it have been discussed by Riemer (2005, 2006), especially with respect to the methodology of natural semantic metalanguage (e.g. Wierzbicka, 1996). To be brief, I will only point to its fundamental paradox: a semantic description must add something to our understanding of the object of description, or it would be useless, but if it adds something, it must be understood differently than the object of description, and hence there can be no identity of meaning. The lack of identity is not simply a condition from which semantic descriptions may occasionally suffer – it is a necessary condition for them to be useful. This condition is due to the very nature of the enterprise: the object language is grasped in naive linguistic judgements (speakers’ intuitions), whereas the description draws on further resources, introduced as part of the scientific endeavour. Object language and metalanguage are therefore not commensurable in the way that is sometimes presumed.

This necessary lack of identity means that the evidence for semantic descriptions should not be sought in identities of the purported sort. The evidence is to be found in observations. The discussion of *från* and *till* showed parallels and agreements between different uses, where we could also notice analogies in their otherwise domain-specific content.

We also saw that some allosemes straddle domains. These observations and others like them constitute the relevant data, which form the basis for a description in which theoretical entities, such as sememes, are posited.

The observations drawn upon in the previous section are of course susceptible to different interpretations, depending on one's theoretical commitments and assumptions. A domain-specific approach, assuming a high degree of conceptual dependency, will be prone to ascribe parallels between domains to conceptualisations of non-space in terms of space, whereas a domain-neutral approach, assuming that language maintains a significant degree of conceptual autonomy, will be prone to ascribe the very same parallels to structures generalising over domains. Tackling the ontologies underlying the disagreement, with all their assumptions about language and cognition, is not manageable in the present context.⁹ In order to contain the discussion, I will have to circumvent these matters. Attention will instead be brought to a few methodological reasons for adopting a domain-neutral approach.

It seems reasonable, although perhaps not universally accepted, that semantics should be governed by three methodological imperatives: that we *generalise* over individual phenomena, that we *analyse* our object of study into component parts, and that we *seek simpler descriptions* as opposed to more complicated ones. Construed as long-term goals to be pursued when feasible, these imperatives should be relatively uncontroversial in any scientific endeavour. Applied to the present object of study, they can be formulated in terms of four principles, each providing methodological guidance for one particular aspect of semantic description:

1. The most basic way of achieving generality in semantic description is to generalise over individual uses, that is, to seek out invariant semantic features that reveal order in the plethora of contextual variations. Although the zeal for such generalisations varies between semantic theories, it is commonly recognised that some inclination towards generalisation is required, lest meanings be multiplied without constraint. New sememes cannot be posited for every semantic variation observed for an item. Provided that two descriptions are both sound, the description with fewer and more comprehensive sememes should, accordingly, be favoured over the description with more and less comprehensive sememes. Call this the Comprehensiveness Principle.

This principle is instrumental for the interpretation of data such as in the previous section. Without it, there would be nothing preventing us from postulating new sememes for all observed variations, eschewing any attempt at generalisation over individual uses.

2. In order to promote generality and simplicity of description, we should be well-advised to prefer direct (literal) representations over indirect (non-literal) representations. Indirect representations, such as metaphors, are introduced to account for the semantic range of an item. Whereas the whole structure may cover a large semantic range, the sememes are kept specific, typically limited to one domain. Instead of adopting a domain-neutral sememe that ranges over space and time, one would posit a primary spatial sememe, which is then applied to the temporal domain. This runs counter to the imperative that we generalise, or more specifically, to the Comprehensiveness Principle.

Indirect representations are also more complex than direct representations. They are never the default case – some particular prompt is required for them to appear – and they introduce an extra level of description.¹⁰ Specification from general to specific structures, on the other hand, can be presumed to be an invariant feature of interpretation, because linguistic expressions always undergo some contextual variation. The device is therefore given for free.

For these reasons, it seems beneficial to favour mechanisms of specification over mechanisms of association in accounts of the semantic range of linguistic items. In other words, given the choice between a *specifying* interpretation (from a sememe to an alloseme), on the one hand, and an *associative* interpretation (from a sememe to a content not subsumed by it), on the other, the former should take precedence. Call this the Directness Principle.

3. Similar considerations apply to the internal structure of sememe–alloseme pairings. In order to maintain a high degree of generality, and in order to avoid indirect representations, a sememe must be compatible with all aspects of its allosemic interpretation. If an alloseme pertains to more than one domain, for example, then the sememe should accommodate all of them. In the case of *från* and *till*, this has two consequences – one with respect to the feature coincidence (Example 6 and 8) and another with respect to the sequence in which this feature occurs (Example 8). With respect to the feature, we have reason to adopt a domain-neutral interpretation, as it otherwise would conflict with some aspects of allosemes that straddle domains. We are also, for the same reason, compelled to assume that the sememe encodes a sequence that remains neutral to different variants, such as sequences of gradual and sequences of immediate transition. Call this the Integrity Principle.

If a sememe fails to be neutral in this respect, some part of its interpretation must instead be handled by indirect representations. One would then assume that one domain is primary. Other domains and semantic features related to them

⁹ But see Willems (2011) for a comparison of European structural linguistics and cognitive grammar, which differ radically in this respect.

¹⁰ A similar point is made by Murphy (1996) in a critique of conceptual metaphor theory, leading him to conclude that explanations in terms of metaphor should, if possible, be avoided.

would be accounted for with the aid of derivations from the primary domain. As stated under the Directness Principle, this should be avoided.

4. In accordance with the imperative that we analyse, semantic accounts should strive to break the semantic content down into component parts, so as to reveal its internal structure. Apart from favouring the well-known style of compositional analysis, this principle also entails that some derivations can be dismissed on the basis of compositional criteria. Take the case mentioned above that localist accounts see state changes as derived from motion. The problem, I argued, is that it purports to derive the simpler concept (change) from the more complex concept (motion). Change is inherent in motion; motion is not inherent in change. It therefore seems more plausible, and more in line with good analytical practice, to first isolate a general semantic feature *CHANGE* before such derivations are attempted. Call this the Decomposition Principle.

By adhering to three methodological imperatives that are generally considered to be sound, we arrive at the conclusion that it is worthwhile to undertake domain-neutral descriptions – or at least, that it should be attempted. It goes without saying, however, that no scientific endeavour can proceed mechanically from a set of principles, so the four principles formulated on the basis of these imperatives cannot be applied in an absolute fashion, as this would yield unreasonable results. Absolute application of the Comprehensiveness Principle would yield that all expressions are monosemous, of the Directness Principle that there are no metaphors, of the Integrity Principle that there can be no secondary inferences that transcend the boundaries of a sememe, and of the Decomposition Principle that each analysis must reduce to semantic primitives (which, if nothing else, is unrealistic). Each object of description requires that many other factors are taken into account, so the four principles do not provide perfect solutions to empirical problems. They do, however, provide methodological reasons for pursuing domain-neutral accounts.

5. SEMEMIC STRUCTURES

We have seen that *från* and *till* exhibit parallels in different domains, which suggested that these uses are domain-specific derivations from a common semantic structure. In the previous section, a few methodological considerations reinforced this suggestion. In the present section, the structure of the proposed domain-neutral sememes is spelled out in greater detail. In order to make this analysis possible, a notation for the representation of sememic and allosemic structures of prepositions is introduced. This notation is not intended to be a formal language in a mathematical sense. Its purpose is simply to sharpen the proposed analyses by imposing upon them a consistent format of representation.

In accordance with the goals of a domain-neutral semantics, the notational format is subject to a few desiderata. The notation should be able to represent 1) the structure of sememes, 2) the structure of allosemes, and 3) the relationships holding between them. It also seems desirable for it to distinguish between 4) the semantic core of a preposition and 5) its argument structure together with selectional restrictions. The notation should, moreover, be able to do these things in accordance with the four principles discussed in the previous section. The present and the following section work towards these goals.

The basic format of the notation is a feature structure as shown in (12). This style adapts a few traits from the notation of the generative lexicon theory (Pustejovsky, 1995), such as the use of equal signs for the assignment of values. These adaptations are a practical and aesthetic choice; no further connection or compatibility is intended.

$$(12) \left[\begin{array}{l} \mathbf{x}_1 \\ \text{CORE} = [\text{DOMAIN} = []] \\ \text{ARGS} = \left[\begin{array}{l} \text{ARG}_1 = [] \\ \text{ARG}_2 = [] \end{array} \right] \end{array} \right]$$

The first line contains the expression to be analysed. The index indicates that there might be other structures associated with the expression. Only in cases of monosemy would there be no need for indices. Phonetic transcriptions, glosses and translations optionally follow below. The semantic analysis begins with the main features of the preposition, labelled *CORE*. The core contains information about the domain, which may be left unspecified in cases of domain-neutrality. It will also contain features (semantic components) that describe the sememes and allosemes of prepositions. There are no predefined constraints on how many or what kind of features it may contain. The arguments of the preposition – typically two in number – are shown below the core. The external argument is indexed as *ARG*₁, and the internal argument (the complement of the preposition) is indexed as *ARG*₂. The notation also makes use of downward arrows (↓) to

indicate that an alloseme is specified from a superordinate semantic structure, of rightward arrows ($\rightarrow$) to indicate implication, and of mapping arrows ($\mapsto$), which show that the interpretation of an argument involves a mapping from a base category to another category that pertains to a specific domain. The use of these symbols is illustrated in the next section.

These are the elements of the basic notation. For the description of sememes and allosemes of particular prepositions, further elements will have to be introduced, but these do not form a closed set. I do not have a complete meta-language to describe the sememes and allosemes of all possible prepositions, and there is no complete description of all domains. In what follows, we encounter the following four domains: space, time, identity and meronymy. Related to these domains are the categories to which arguments belong. We will encounter: object, place, event, time, property, part and whole. These domains and categories are obviously not exhaustive, but they cover sufficient ground to describe some important aspects of *från* and *till*.

In the description of *från* and *till*, three elements were invoked: coincidence, negation and sequence. The former is a condition that appears in a sequence together with its negation: *från* expresses a coincidence (c) that precedes a non-coincidence ($\neg c$), and *till* expresses a non-coincidence that precedes a coincidence. We have also observed that, in some cases, the transition between the two conditions is immediate and that, in other cases, it is non-immediate. To express this in an economical fashion, the following notation for sequences will be used.

(13a) shows a generalisation over the two kinds of sequence just mentioned. The indices $i, j \in \mathbb{N}$ count positions in the sequence, starting from 1. The value of i is 1 and the value of j is equal to or greater than 2. When the value is 2, the sequence contains only two terms; otherwise, it contains repetitions of c or $\neg c$. A further constraint, not explicitly expressed in the notation, is that all repetitions must be contiguous with each other: there is no going back and forth between c and $\neg c$. (13b) shows the specific case with an immediate transition, and (13c) shows the specific case with intermediate stages. Granted, to describe all transitions of the latter type as sequences with property $j > 2$ is a rather coarse characterisation, but it captures different cases. A light that changes colours may do so in distinct steps involving a sequence with three terms, while an object moving from one place to another requires a high, possibly indeterminate number of terms. In the latter case, there is likely to be some region where the distinction between c and $\neg c$ becomes vague, that is, the exact point where the transition from coincidence to non-coincidence occurs may be difficult to pinpoint. I will ignore such complications here, focusing instead on the more general issues.

- (13) a. $(c_i, \dots, \neg c_j)_{i=1}^{j \geq 2}$
 b. $(c_i, \neg c_j)_{i=1}^{j=2}$
 c. $(c_i, \dots, \neg c_j)_{i=1}^{j > 2}$

The sememes of *från* and *till* can now be described as in (14) and (15). The first line introduces the feature coincidence, treated here as a semantic constant with the abbreviation c. The second line places this feature in a sequence together with its negated counterpart. Since (14) and (15) are descriptions of the sememes, the generalisation from (13a) is used here. These sequences of coincidence and non-coincidence can be interpreted as predicates with respect to the two arguments. In the case of *från*, we have $c(\text{ARG}_1, \text{ARG}_2)$ (the two arguments coincide), which is then followed by $\neg c(\text{ARG}_1, \text{ARG}_2)$ (the two arguments do not coincide). In the case of *till*, the order is reversed. The third line defines constraints on the domain of the preposition. Since there are no such constraints in the present case, the domain is left without value. Similarly, there appear to be no semantic constraints on the arguments, so these are left empty as well. Since little is known about the semantic valence of domain-neutral prepositional sememes, this might be a premature conclusion, but there are at present no obvious candidates for such constraints. As will become clear in the next section, constraints on arguments are correlated with constraints on the domain, so provided that there are constraints in one of these places, constraints in the other are expected as well.

- (14)
$$\left[\begin{array}{l} \text{från}_1 \\ \text{'from'} \\ \text{CORE} = \left[\begin{array}{l} c = \text{coincidence} \\ (c_i, \dots, \neg c_j)_{i=1}^{j \geq 2} \\ \text{DOMAIN} = \square \end{array} \right] \\ \text{ARGS} = \left[\begin{array}{l} \text{ARG}_1 = \square \\ \text{ARG}_2 = \square \end{array} \right] \end{array} \right]$$

$$(15) \left[\begin{array}{l} \text{till}_1 \\ \text{'to'} \\ \text{CORE} = \left[\begin{array}{l} c = \text{coincidence} \\ (\neg c_i, \dots, c_j)_{i=1}^{j \geq 2} \\ \text{DOMAIN} = \emptyset \end{array} \right] \\ \text{ARGS} = \left[\begin{array}{l} \text{ARG}_1 = \emptyset \\ \text{ARG}_2 = \emptyset \end{array} \right] \end{array} \right]$$

6. ALLOSEMIC STRUCTURES

The relationship between a sememe and an alloseme is a polyvalence structure with the sememe as superordinate term (see Widoff, 2022, on polyvalence). In traditional terminology, the alloseme is a variant of a sememe, which is the invariant. Each alloseme corresponds to one and only one sememe, since an alloseme is a contextual interpretation of a sememe, whereas the inverse does not hold, barring the exceptional case where the sememe is identical to the alloseme. The interpretation adds information to the sememe, but it does not remove or change any information that is encoded in the sememe.

Drawing on the insights of structural linguistics (esp. Hjelmslev, 1961), we may conclude that there can be no principled reason to halt analysis after one step of stratification. The structure can, in principle, be repeated an indefinite number of times, yielding the possibility of n th-order allosemes that stand in many-to-one relationships with superordinate allosemes. There are of course actual limitations to such an analysis. It will not go on forever, but we should expect there to be more than one order of allosemes.

The possibility of second-order allosemes raises the question of how to circumscribe first-order allosemes. We obviously do not want to include everything belonging to a possible interpretation in the first step. If we did so, we would have failed to generalise over individual uses, and there would be no need for further steps. It should be useful to have some criterion for constraining the complexity of first-order allosemes, pushing additional specifications further down the polyvalence hierarchy. One possible criterion is to let first-order allosemes be 1) exclusively constrained by what is conceptually necessary to maintain semantic congruency, whereas they are 2) not constrained by what is conceptually preferred due to common expectations. Among second-order allosemes we would then find a class of preferred interpretations.

There are no doubt many borderline cases between congruency and preference that would have to be worked out as research progresses. This is an intricate area of semantic analysis, so complications are to be expected. While such difficulties cannot be denied, it still seems fruitful to distinguish interpretations that are conditioned by the nature of domains from interpretations that are conditioned by expectations based on what is common or typical. This corresponds to the difference between inferring a spatial reading in (3), repeated here as (16), and inferring that in (16b), the people went across the border, and in (16a), they did not drive their vehicle all the way into the store. The first inference is imposed with great force – an interpretation without it is hard to imagine – whereas the other two are more contingent – no serious conceptual confusion follows if they fail to occur. Under the congruency criterion, first-order allosemes contain inferences only of the first type.

- (16) a. De körde till butiken.
 they drove to store:DEF
 ‘They drove to the store.’
 b. De körde till Danmark.
 they drove to Denmark
 ‘They drove to Denmark.’

The prepositions *från* and *till* are specified with respect to the sequence, with respect to the domain and with respect to their semantic arguments. The alloseme of *till* in (16a) is shown in (17) below. Note that the analysis pertains to the preposition in boldface. The full sentence is the context in which the preposition receives the stated interpretation. Downward arrows indicate a superordinate semantic structure from which information has been inherited, which in this case is the sememe as stated in (15). For convenience, inherited information is not repeated in the subordinate structure.

$$(17) \left[\begin{array}{l} \text{De körde till}_1 \text{ butiken.} \\ \text{'They drove to the store.'} \\ \downarrow \text{CORE} = \left[\begin{array}{l} (\neg c_i, \dots, c_j)_{i=1}^{j>2} \\ \text{DOMAIN} = \text{space} \rightarrow c = c_{\text{space}} \end{array} \right] \\ \downarrow \text{ARGS} = \left[\begin{array}{l} \text{ARG}_1 = \text{object} \mapsto \text{place} \\ \text{ARG}_2 = \text{object} \mapsto \text{place} \end{array} \right] \end{array} \right]$$

The domain is specified as space, which then implies a domain-specific interpretation of c , marked with a subscript. The sequence is specified to have intermediate terms between $\neg c_i$ and c_j . Since the alloeme is spatial, this means that the sequence is a path in space. This path goes from a place without coincidence to a place with coincidence, or more precisely, from a place where ARG_1 does not coincide with ARG_2 to a place where it does so. The path is limited by these two conditions: $\neg c(\text{ARG}_1, \text{ARG}_2)$ and $c(\text{ARG}_1, \text{ARG}_2)$, where c is taken to be a predicate with two arguments.

The values of the arguments show that the base category of the arguments is mapped to another category that pertains to the domain in question. Ignoring finer distinctions such as animate–inanimate, we can take both arguments to denote objects. This is the base category for most NPs. This category is then mapped onto the spatial category of place. With respect to a specific object, this means that the object is mapped onto its eigenspace, the region of space that it occupies. In (16a), both eigenspaces have an extension, but places may also be zero-dimensional points in space.

The mapping in the argument structure from objects to places is necessitated by the assumed division between conceptual systems. Unable to interpret phenomena outside their domain, each system handles only certain aspects of interpretation. The various properties of the objects in (16a), such as the animacy of the people and the economic purpose of the store, are accessible to other conceptual systems, but they are unavailable to the spatial system, which is exclusively concerned with spatial relations. The domain-specific interpretation of sememes thus involves a *domain-specific ontological reduction* by which the full interpretation of an argument (in which all of its properties are contained) is reduced to properties pertinent to the domain in question. In other words, the relationship of coincidence that occurs between the people and the store does not pertain to the objects as such. It is not the case that the objects in themselves coincide – they are not identical. It is the places of the objects – where they are located – that coincide.

In the case of some other domains, the nature of the reduction is not always as straightforward, but it will have to be assumed that conceptual systems handle subsets of the properties associated with a semantic argument, unless the argument is already constrained to the appropriate domain. If this were not the case, the distinction between domains would be undermined.

The temporal alloeme shown in (18) runs along similar lines. The domain is specified to be time and the sequence is specified to be a sequence with intermediate terms. These properties yield a progression in time where coincidence turns into non-coincidence, or more precisely, a progression where two stretches of time transition from coinciding to not coinciding.

$$(18) \left[\begin{array}{l} \text{Han arbetar från}_1 \text{ morgon till kväll.} \\ \text{'He works from morning to evening.'} \\ \downarrow \text{CORE} = \left[\begin{array}{l} (c_i, \dots, \neg c_j)_{i=1}^{j>2} \\ \text{DOMAIN} = \text{time} \rightarrow c = c_{\text{time}} \end{array} \right] \\ \downarrow \text{ARGS} = \left[\begin{array}{l} \text{ARG}_1 = \text{event} \mapsto \text{time} \\ \text{ARG}_2 = \text{time} \end{array} \right] \end{array} \right]$$

In the temporal domain, the interpretable arguments are intervals or points in time, paralleling the arguments of the spatial domain, which are either regions or points in space. For the first argument, there is a domain-specific ontological reduction in the form of a mapping from the category of events to the category of times. For the second argument, there is no need for a reduction, since the argument is already restricted to the appropriate domain: *morgon* 'morning' is a temporal word denoting an interval of time. The values of the arguments show that the relationship of coincidence involves the time of an event and a time of the day. The domain-specific interpretation of *från* in (18) is that the time during which the event of working occurs proceeds from coinciding with the morning to not coinciding with the morning. The interpretation of *till* in the same sentence is the converse of the interpretation of *från*, but with *kväll* 'evening' as second argument, as shown in (19).

$$(19) \left[\begin{array}{l} \text{Han arbetar från morgon till}_1 \text{kväll.} \\ \text{'He works from morning to evening.'} \\ \downarrow \text{CORE} = \left[\begin{array}{l} (\neg c_i, \dots, c_j)_{i=1}^{j \geq 2} \\ \text{DOMAIN} = \text{time} \rightarrow c = c_{\text{time}} \end{array} \right] \\ \downarrow \text{ARGS} = \left[\begin{array}{l} \text{ARG}_1 = \text{event} \mapsto \text{time} \\ \text{ARG}_2 = \text{time} \end{array} \right] \end{array} \right]$$

The allosume in (20) presents us with a few variations not seen in the previous two cases. The domain concerns the identity, properties and classification of objects, as in the *identificational field* of Gruber (1965). I shall call it the domain of identity. In this sentence, the object (the light) transforms from having one property (blue) to having another property (green), with *från* contributing the initial condition and with *till* contributing the final condition. The sentence is undetermined with respect to the aspectual properties of the change, permitting both an instant and gradual change of state. The sequence therefore keeps the general form as given in the sememe. Unlike in the previous examples, it is not obvious whether the arguments in (20) require an ontological reduction similar to those seen for the spatial and temporal domains. As it is unclear what such a reduction would look like, I will presume that they do not. The noun is then taken to denote an object and the adjective is taken to denote a property.

$$(20) \left[\begin{array}{l} \text{Ljuset växlar från}_1 \text{blått till grönt.} \\ \text{'The light changes from blue to green.'} \\ \downarrow \text{CORE} = \left[\begin{array}{l} (c_i, \dots, \neg c_j)_{i=1}^{j \geq 2} \\ \text{DOMAIN} = \text{identity} \rightarrow c = c_{\text{identity}} \end{array} \right] \\ \downarrow \text{ARGS} = \left[\begin{array}{l} \text{ARG}_1 = \text{object} \\ \text{ARG}_2 = \text{property} \end{array} \right] \end{array} \right]$$

In Section 3, we saw that certain noun phrases have both spatial and meronomic aspects, thus activating both domains. In some cases, the spatial interpretation may at first seem sufficient, but in order to capture the variations shown in (21), it is necessary to include both domains. (21a) is both spatial and meronomic – the engine is in the same place as the car and the engine is also part of the car. (21b) is only spatial – the water is not part of the car. (21c) is dynamic and involves a sequence of coincidence and non-coincidence in both domains. (21d) is dynamic in the same general way, but it is restricted to space. (21e) is meronomic without spatial interpretation (under the abstract reading discussed earlier). Unless the presence of both domains in (21a) and (21c) is recognised, their difference from other allosumes, such as (21b), (21d) and (21e), cannot be appropriately described.

- (21)
- | | | | |
|----|-----------------------------|------|------------|
| a. | motorn | i | bilen |
| | engine:DEF | in | car:DEF |
| | 'the engine in the car' | | |
| b. | vattnet | på | bilen |
| | water:DEF | on | car:DEF |
| | 'the water on the car' | | |
| c. | motorn | från | bilen |
| | engine:DEF | from | car:DEF |
| | 'the engine from the car' | | |
| d. | mjölken | från | kylskåpet |
| | milk:DEF | from | fridge:DEF |
| | 'the milk from the fridge' | | |
| e. | kapitlet | från | boken |
| | chapter:DEF | from | book:DEF |
| | 'the chapter from the book' | | |

Allosemes involving more than one domain require that each main section in the notation is repeated once for every domain. (22) shows an analysis of (21c). There is a spatial interpretation, concerned with the location of the objects, and there is a meronomic interpretation, concerned with the part-whole relationship of the objects. In the meronomic domain, the two objects are ontologically reduced to part and whole. The spatial interpretation specifies that the engine is no longer in the same place as the car, and the meronomic interpretation specifies that this part of the car is no longer integrated with the whole. How the sequences are to be interpreted is not entirely obvious, but in keeping with my previous reasoning, we may assume that the lack of verbal contexts precludes motion in space, that is, there is no expression of a path. The particular realisation of the sequence remains undetermined. The same reasoning applies to the meronomic domain.

$$(22) \left[\begin{array}{l} \text{motorn fr n}_1 \text{ bilen} \\ \text{'the engine from the car'} \\ \downarrow \text{CORE}_1 = \left[\begin{array}{l} (c_i, \dots, \neg c_j)_{i=1}^{j \geq 2} \\ \text{DOMAIN} = \text{space} \rightarrow c = c_{\text{space}} \end{array} \right] \\ \downarrow \text{ARGS}_1 = \left[\begin{array}{l} \text{ARG}_1 = \text{object} \mapsto \text{place} \\ \text{ARG}_2 = \text{object} \mapsto \text{place} \end{array} \right] \\ \downarrow \text{CORE}_2 = \left[\begin{array}{l} (c_i, \dots, \neg c_j)_{i=1}^{j \geq 2} \\ \text{DOMAIN} = \text{meronymy} \rightarrow c = c_{\text{meronymy}} \end{array} \right] \\ \downarrow \text{ARGS}_2 = \left[\begin{array}{l} \text{ARG}_1 = \text{object} \mapsto \text{part} \\ \text{ARG}_2 = \text{object} \mapsto \text{whole} \end{array} \right] \end{array} \right]$$

7. PATHS AND SEQUENCES

It was noted in Section 3 that there are parallels between sequences in different domains, including the fashion in which they are determined to have a specific form. These parallels suggest that either one of two things obtains. Either 1) domain-specific interpretations rely on domain-neutral structures from which structural properties are inherited, or 2) one domain stands as a model for other domains, thus imparting the latter with some of its properties. The second option tends to be localist: derivations go from space to non-space rather than in other directions. A time interval is then taken to be like a region in space, and the passage of time is taken to be like motion in space (Clark and Moore, 1973; Talmy, 2000a; Talmy, 2000b; Gentner et al., 2002; Fauconnier et al., 2008; Moore, 2017; and many others). In the most popular theory, there are two models for such metaphors: the metaphor either involves a moving ego in stationary time or a moving time relative to a stationary ego. According to conceptual metaphor theory, metaphors of this sort are constitutive: they are intrinsic to our conceptualisation of time and hence also to how we experience time (Lakoff and Johnson, 1980; Lakoff and Ortony, 1993; Lakoff and Johnson, 1999).

Other domains are conceptualised along similar lines. Talmy (2000b, 240) represents the change of state in (23) as a motion to the state of death, that is, as analogous with motion in space. Chilton (2014, 69), in a similar vein, argues that "it is appropriate to use the geometrical notion of a displacement vector to model change-of-state meanings" with reference to sentences like (24) and (25). Krifka (1998), citing the sentence in (26), expresses a comparable view: "Change of qualities is structurally similar to movement in space. For example, the change of temperature of an object can be seen as a movement in temperature space" (228f).

- (23) He choked to death on a bone.
 (24) The economy moved from recovery to expansion.
 (25) From being a hamster Fred turned into a monster.
 (26) Mary heated the water from 30 °C to 90 °C (in an hour).

Under such a localist view, sequences of this sort are derived from paths in space. The methodological reasons presented in Section 4 in favour of an alternative analysis involving generalisation over domains still stand. In this particular case, there are also two further reasons for regarding domain-neutrality as the preferable hypothesis:

1. *Comprehension of motion in space requires time indices.* It is of course likely that certain cases cited in the literature are indeed metaphors, but it makes little sense to assume that passage of time is represented as motion in space

at a fundamental, conceptual level. It does not make much sense, because motion is incomprehensible without the passage of time – it requires that positions in space are correlated with points in time. Without temporal constitution, motion loses its structure, because without it, there is no dimension by which the changes from one location to another are ordered. The idea that passage of time is based on motion in space is thus circular.

The source of the error, one may venture to guess, is the prominence of motion in experience. Objects in motion are often the focus of attention; the flow of time is not. This probably explains many metaphors. But what is at stake here is the cognitive structure, and it then constitutes an oversight to neglect the constitutive role of time.

While the involvement of time in motion is fairly obvious, upon closer scrutiny, it becomes clear that also the perception of stationary objects requires an apprehension of time. An object at rest is perceived as resting through a duration where there is no change of location. If we were to perceive the world as a snapshot, we would not be able to make out the difference between the presence and absence of motion, because there would be no duration under which to register the difference. Stationariness, therefore, is not a time-less situation. It is a situation of motional changelessness through an interval of time.

The notion that time structures experience, and that it does so more pervasively than space, is a recurring theme in the work of Husserl (1966, 1997) that has informed much subsequent work on the role and perception of time. Husserl's analysis of spatial perception shows that all experience of spatial objects has a temporal structure, whereas the perception of time does not necessarily involve space. Furthermore, it reveals that the perception of spatial configurations – whether static or not – relies on the possible or actual motions of the body and on how objects and motion are related in time consciousness. For instance, as we walk around and see objects from slightly different angles, the different profiles – the momentary appearances – by which the objects present themselves in perception must be temporally structured in order for a coherent whole to form. It is on the basis of such temporally structured series of profiles that we perceive objects as stable, lasting entities in the world. Since there is no similar dependence in the opposite direction, it is space that presupposes time rather than the other way round, according to Husserl. In this sense, all spatial configurations have a basis in time and motion.

Similar views have developed also in other fields. Poincaré (1946), in his works on mathematics, space and physics, argued that self-motion plays a crucial role in the genesis of the notion of space. It is the motion of our body, he concluded, that distinguishes changes of position from changes of state:

For a being completely immovable there would be neither space nor geometry; in vain would exterior objects be displaced about him, the variations which these displacements would make in his impressions would not be attributed by this being to changes of position, but to simple changes of state; this being would have no means of distinguishing these two sorts of changes, and this distinction, fundamental for us, would have no meaning for him (248).

In linguistics, Evans (2003) has argued for the same kind of centrality of time as Husserl, emphasising that “the essence and origin of temporality is crucially internal in nature” (32). This fact does not contradict, Evans argues, that there are many possible conceptualisations of time, but it entails that time cannot, at a fundamental level, be derived from external phenomena such as spatial events. Langacker (1987) expresses similar views, although somewhat less decisively, arguing that time is a basic, irreducible domain, and that it is probably more basic than space, because “the conception of spatial relationships involves scanning, which requires processing time, and our notions of spatial extension are intimately bound up with time-extended physical actions (e.g. movement and the manipulations of objects)” (149). Time can still be conceived in terms of space, Langacker contends, since it may have utility for higher-level conceptualisations. In other words, it is still possible to have spatial metaphors, but the need for them is weakened in comparison to theories that claim that such metaphors are fundamental in the comprehension of time. Givón (2018, 235ff) provides a possible explanation for how one can have it both ways: there is an implicational hierarchy of existence, going from spatial via temporal to general existence, as shown in (27):

(27) exist in space $\supset$ exist in time $\supset$ exist

The hierarchy entails that time, in a certain sense, is more basic than space, because what exists in space also exists in time, but not vice versa. As the hierarchy progresses towards greater generality, the degree of abstractness increases as well: spatial existence represents the most concrete form of existence. Linguistic items can thus extend their semantic range to include more than space through the process of semantic bleaching. The present study has not dealt with such diachronic processes per se. It has instead focused on what might be the synchronic effects of such processes.

2. *Space is a poor model for transitions without intermediary stages.* To avoid any misunderstanding, it should first be noted that spatial events can be represented in ways that seem to diverge from the properties of space. A verb like *teleportera* ‘teleport’ encodes – in an entirely idiosyncratic fashion – a sequence of only two locations in contradiction to the properties of motion in space. We have also seen that an abstract motion verb such as *förflytta* ‘move’ is compatible with

such an event. Less fantastically, Kita (1999) has argued that Japanese *hairu* ‘enter’ and *deru* ‘exit’ encode a discrete change without expressing motion along a path, thus involving only two positions. Tsujimura (2002) disputes Kita’s claim that discrete change is a mandatory feature of these verbs but concedes that there is an interpretation under which it obtains. Another case in point is an achievement verb like English *arrive*. Although it has often been described as a directed motion verb (e.g. Levin, 1993), it is doubtful whether it encodes a path. Arguably, in a sentence like (28), it rather expresses an instantaneous appearance in which the moving object, the theme, comes to be at a place. This accounts for why it does not go well together with durative adverbials such as *for an hour* (cf. Krifka, 1998) or with measure phrases such as *five hundred metres*. Importantly, however, this effect is due to aspectual properties of the predicate. The interpretation cannot be inferred on general conceptual grounds, because the motion bringing about the appearance must have involved a path. The predicate suppresses this property of space by circumscribing the event to the transition that brings about the end-state of the motion.

(28) We arrived at the station.

Hence, it is perfectly possible for a language to represent space in ways that do not involve intermediary stages, but only so if this is due to an encoded content stored in the lexicon. The conceptual system cannot infer such a change, because such changes do not occur in space as we comprehend it. Motion of an object from one location to another necessarily involves the object traversing locations in between the source and the goal of the motion.

The same constraint does not apply to all domains. The change in the colour of a light, for instance, can very well be instantaneous in so far as human perception is concerned. A sentence like (9), repeated here as (29), thus permits two interpretations, as we have seen in previous sections. It follows from this that a sequence delimited by two states in the domain of identity does not necessarily involve intermediary states; it can also be a sequence with only two terms. Similarly, a transfer of possession, as in (30), requires no intermediates, and neither does the act of communication expressed in (31).

- (29) Ljuset växlar från blått till grönt.
 light:DEF switch from blue:N to green:N
 ‘The light changes from blue to green.’
- (30) Hon skänkte sin förmögenhet till välgörenhet.
 she donated RP fortune to charity
 ‘She donated her fortune to charity.’
- (31) De mottog ett förslag från kommittén.
 they received a proposal from committee:DEF
 ‘They received a proposal from the committee.’

For these sequences to be modelled on space, they would have to undergo an adjustment from presupposed intermediary stages to no such presupposition, following the change of domains. This makes space a rather poor model for these domains. Why derive non-space from space, when it produces such complications, which could be avoided? One might also expect there to be some reflex in language indicating that such sequences have been modelled on a cognitive system presupposing sequences with intermediary terms, but no evidence to this effect has been presented. If anything, language is more prone to represent gradual phenomena in discontinuous ways than vice versa.

8. CONCLUSION

The article set out to demonstrate that a domain-neutral semantics that generalises over domains presents a feasible, albeit underdeveloped, alternative to domain-specific accounts of prepositions. Parallels between the uses of Swedish *från* and *till* in different domains were investigated and accounted for in a domain-neutral fashion. The investigation revealed that some alloemes even encompass more than one domain at once, a semantic complication for which the domain-neutral approach provides a straightforward solution. Methodological reasons for favouring domain-neutral accounts were also presented. In order to present descriptions of the relation between sememes and alloemes in a precise and consistent way, a semantic notation was introduced and applied to *från* and *till* as used in different domains. Finally, it was argued that there are two additional reasons for not basing sequences on paths in space: passage of time cannot be derived from motion in space, because the latter presupposes the former, and space is a poor model for transitions without intermediary stages.

I take these results to make a solid case for a domain-neutral approach to prepositional semantics. As a precaution against overstating the breadth of the present study, it should be acknowledged that the analyses presented here are rudimentary and the empirical scope limited. Much work remains to develop the implications of the semantic structures explored here, and many other semantic areas, not touched upon here, require independent investigation. Still, the approach has been shown to produce interesting results, suggesting there is promise for future studies in domain-neutral semantics.

ABBREVIATIONS

DEF = definite, N = neuter, PASS = passive, RP = reflexive-possessive.

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