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Metonymization

A key mechanism in semantic change

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Metonymization: A key mechanism in semantic change[*]

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Abstract
Despite a sizable functional literature on variation and change, very little attention has been given to the diachronic *mechanisms* of meaning shifts and change covering the whole continuum from contentful to configurational meanings. This paper is an attempt to start filling this gap. It proposes a unitary approach to the mechanisms of variation and change within the Cognitive Linguistics framework. Two types of construals are considered to be essential for the differences between change and shifts, namely *metonymization* and *zone activation*, both of which are PART–WHOLE configurations that profile aspects that are contextually motivated in a given situation in human communication. Metonymization is a construal that operates *between* senses, while activation of zones operates *within* senses.

Key words: Construal; Zone activation; Profile; Configuration; Sense; PART–WHOLE,

1. Introduction

Language is most essentially the opposite of mathematics, which exclusively deals with the relations of concepts to each other without consideration of their relation to experience. Language deals with concepts that are strongly related to experience. The "use potential" of a lexical item is a conceptual structure that has been built up and is being built up by its different uses in different situations. In all usage events only a portion of the total use potential of a lexical item is evoked. It is on the occurrence of use in human communication that the more specific focus of attention and the profiling of the meaning of a lexical item in context are being fixed. This means that meanings of words in context are pragmatically motivated and formed by construals operating on their use potential. Two types of construals, which are frequently referred to as metonymy in the literature, are distinguished as *metonymization* and *zone activation* (Paradis, 2004/2010). These construals are both based on PART–WHOLE / WHOLE–PART configurations and select the most salient aspects of meaning of a conceptual structure on the occurrence of use. However, they differ with respect to conventionalization of the profiled meaning. Metonymization holds *between* senses and activation of zones *within* senses.

This paper argues that metonymization is instrumental in semantic change, both (1) in sense developments from one contentful meaning to another contentful meaning, *e.g.*, *launder* (clothes and money), *mouse* (animal and computer device), or *head* (body part and leader); and in (2) grammaticalization and pragmatization (subjectification and intersubjectification), e.g., *be going to* in its spatial movement sense and as a marker of future time in *be going to*

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and *gonna*, in (inter)subjectification, e.g., *you know*, *like* and *quite*! as pragmatic markers in contemporary English. The particular focus of this article is on the mechanisms of change rather than on the motivations for change, that is, *how*, rather than *why*, new meanings develop, and the claim is that metonymy is key. The treatment of semantic variation and change is couched within Lexical Meaning as Ontologies and Construals (LOC for short, Paradis, 2005) under the Cognitive Semantics umbrella (Talmy, 2000; Croft and Cruse, 2004; Geeraerts and Cuyckens, 2007).

While there is no dearth of research on change and directions of change motivated by different kinds of communicative and pragmatic factors within the functional school of thought (e.g., Hopper and Traugott, 1993; Traugott and Dasher, 2005; Fisher, 2008) and on change causing reanalysis of the paradigm settings in the syntactic derivation in the generative school of thought (e.g., Roberts and Roussou, 2003; Lightfoot, 2006), very little attention has been given to mechanisms of meaning-making and change covering the whole continuum from contentful through grammatical to pragmatic meanings. Mechanisms in the present treatment relate to the actual processes that underlie meaning-making in language use in general – processes which may or may not result in change. In her very final words on future directions in diachronic linguistics, Bybee (2007: 981) calls our attention to this imbalance. "Clearly, reference to cognitive factors brings us closer to explanation in both the diachronic and synchronic realms. In diachrony, it is of utmost importance to emphasize not just the motivation for change, but also the mechanisms; that is, in order to establish why changes occur in a certain direction, we also have to understand how changes occur." (Bybee, 2007: 981).

Metonymization, as it is defined above, involves the use of a lexical item to evoke the sense of something that is not conventionally linked to that particular lexical item (Paradis, 2004/2010). It is effected "on-line" and is an implied, contingent relation that precedes change. In novel uses of form–meaning pairings, couplings between lexical items and their meanings are not conventionalized. Change involves intersubjective entrenchment and conventionalization of metonymical readings and has taken place when form–meaning pairings have been established for certain uses, and focus of attention is again selected through zone activation. In the process of meaning change, there is a continuum from metonymy to zone activation, that is, from non-conventionalized couplings between form–meaning pairs (polysemy) to conventionalized form–meaning pairings and zone activation within senses (Paradis, 2008).[1] Conventionalization is a socio-cognitive phenomenon that requires successful hearer recognition and subsequent acceptance of the speech community. This study centres on metonymization as a mechanism. Needless to say, there is also a motivational side to metonymization, which involves semantic reanalysis and has to do with communicative economy, flexibility in speaker-hearer negotiation and the desire to express oneself at the adequate level on the scale of clarity and specificity.[2]

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[1] The notion of polysemy in my model of meaning does not depend on the notion of conventionalization as it does in most treatments. Polysemies may be conventionalized uses or *ad hoc* uses. This has important theoretical consequences for the aspect of change in that change presupposes conventionalization of polysemies, while non-conventionalized polysemies represent meaning-making without consequences for the speech community. This will become clear as the arguments are being expounded on in the subsequent sections. This view is akin to IINs (Invited Inferences) and GIINs (Generalized Invited Inferences) in Traugott (1999). Intersubjective entrenchment is a term suggested to me by Dylan Glynn.

[2] To avoid confusion, it deserves to be pointed out that reanalysis and analogy are often treated as mechanisms in the literature (e.g., Hopper and Traugott, 1993: 88; Eckardt, 2006). In contrast to those treatments, I see reanalysis and analogy as motivations for mechanism such as metonymization and metaphorization., Reanalysis and metonymization are considered primary and crucial in change. Another mechanism that has

The article is structured as follows. Section 2 gives a short description of the foundational Cognitive Linguistics assumptions and of LOC, the model of analysis. Section 3 deals with the notions of metonymization and zone activation in previous treatments and in the present model. In Section 4, I proceed to discuss the relevance of metonymization and zone activation in variation and change. Section 5 gives a more detailed description of the mechanism of metonymization in the development from contentful to new contentful meanings, and in Section 6 from primarily contentful meanings to new primarily configurational meanings. Finally, Section 7 offers a conclusion, and thereby my contribution to the study of metonymization within Cognitive Linguistics and the enterprise of this volume to reach a consensus on the delimitation of the notion.

2. Lexical Meaning as Ontologies and Construals (LOC)

The common denominator in cognitive approaches to meanings of linguistic expressions is that they are perspectival and profiled according to a "base" or a "domain" (Langacker, 1987; Benczes, this volume), a "frame" (Fillmore, 1982), or an "idealized cognitive model" of a situation (Lakoff, 1987). All these constructs represent presupposed knowledge that is activated, implicated and inferred in communicative situations. "[W]hat holds together the diverse forms of Cognitive Linguistics is the belief that linguistic knowledge involves not just knowledge of the language, but knowledge of our experience of the world as mediated by the language" (Geerearts and Cuyckens, 2007: 7). Being a model within the cognitive framework, LOC adheres to the view of the importance of frames/domains as fundamental constructs in linguistic communication. One major theoretical implication of LOC is that it forces a radical perspective on some of the current claims about the nature of meaning in language. Meanings of linguistic expressions are emergent and get their final interpretation in context. There is no principled difference between creative form–meaning pairings and conventionlized pairings from the point of view of how they are construed.

Following Cruse (2002), LOC states that lexical meanings are constrained by encyclopaedic knowledge, conventionalized mappings between lexical items and concepts, and conventional modes of thought in different contexts and situational frames. Contextual variation is natural and expected in a dynamic usage-based model such as LOC (Paradis, 2005). Cruse (2002) describes the total meaning of a linguistic element as a pattern of readings in conceptual space. He introduces a spatial metaphor which describes readings as bounded regions in conceptual space. According to him, readings tend to cluster in groups and as such they show different degrees of salience and cohesiveness. Between the groups, there are regions that are relatively sparsely inhabited. They are sense boundaries. This take on "sense" and polysemy as a function of distance and boundaries in conceptual space is consistent with the approach in LOC. These boundaries are important for the modelling of the development of new polysemies through meaning change in being the conceptual spaces separating different senses. Such modelling also means that the notion of a sense boundary and boundaries between readings within a sense are closely related to the degree of autonomy of the clusters that the boundaries delimit. Senses exhibit strong signs of autonomy and they are kept apart by substantial boundaries, while readings within a sense are only weakly autonomous or not autonomous at all. It is the symptoms of autonomy that may be highlighted through various definitional tests that provide the evidence for boundaries (Croft and Cruse,

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been suggested more recently is blending as a mechanism in a diachronic study of compounding (Benczes, in press).

2004: 109–140, and for the continuum between metonymization through facetization to zone activation in Paradis (2004/2010).

In LOC, conceptual structures are modelled as two types: content ontologies and configurational ontologies, as shown in Table 1. These two types of structure are on a continuum from primarily contentful to primarily configurational; for that reason the line between the two columns is not solid. Ontologies are not set lexical meanings but pre-meaning structures (or *purport*, to use Cruse's term, Croft and Cruse, 2004: 100–101) that contribute to the final interpretations of lexical items in context. They are not themselves fully-fledged discourse meanings, but are created at lower levels of conceptual organization on the way to discourse meaning construals.

Table 1. Ontologies and cognitive processes in meaning construction, adapted from Paradis (2005).

Ontologies (conceptual structures)		Construals
Contentful	Configurations	*Gestalt*: e.g., structural schematization, profiling
• CONCRETE PHENOMENA • EVENTS, PROCESSES, STATES • ABSTRACT PHENOMENA	PART/WHOLE, THING, RELATION, BOUNDEDNESS, SCALE, DEGREE, POINT, FREQUENCY, FOCUS, PATH, ORDER, MODALITY, …	*Salience* : e.g., metonymization, generalization, zone activation *Comparison*: e.g., metaphorization, categorization *Perspective*: e.g., foregrounding / backgrounding, subjectification

Table 1 divides into Ontologies and Construals. The leftmost column of Table 1 gives the three most general content structures (1) CONCRETE SPATIAL PHENOMENA; (2) SPATIO–TEMPORAL PHENOMENA (EVENTS, PROCESSES and STATES); and completely (3) ABSTRACT PHENOMENA. These top ontologies, in turn, subcategorize into more fine-grained ontologies, such as concrete phenomena, e.g., TREE, WOMAN, STONE; EVENT structures, such as WALK, DIE, SAD; and abstract phenomena, such as IDEA, PROBLEM, ECONOMICS (for more details on the model, see Paradis, 2005). The second column under Ontologies shows various examples of configurational constructs or schemas. The configurations are not listed in any particular order, that is, I make no general claims about whether the configurational ontologies are hierarchically organized or not. Configurations are free ontologies in the sense that they are applicable to many different content structures, not in a one-to-one fashion but in a one-to-many fashion. For instance, configurations such as DEGREE may be associated with all of the three most general types of content ontologies: in *much petrol* the configuration DEGREE (SCALE) is in co-operation with the contentful concrete meaning structure SUBSTANCE. In *he is running around a lot* DEGREE (SCALE) shapes an ACTIVITY, that is, a spatio-temporal meaning structure. In *totally closed*, DEGREE (BOUNDED) combines with STATE. Finally, in *the ultimate idea*, DEGREE (BOUNDED) is in co-operation with an ABSTRACT PHENOMENON. What is traditionally referred to as encyclopaedic knowledge is taken to be represented by contentful meaning structures and linguistic (grammatical) knowledge by configurations.[3] The matching of configurational structures to content structures is motivated by how we perceive of the

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[3]   Talmy (2000: 24–40), too, distinguishes between two types of conceptual structure, the contentful subtype and the schematic subtype. Open-class meanings represent the former and closed-class meanings the latter. Closed-class meanings are constrained by various neutralities, e.g., bulk neutrality (abstracted away from the bulk of bodies in space and reduced to points, lines and the like), magnitude neutrality, shape neutrality, token neutrality and substance neutrality.

world in a given situation. Configurational (structural) meanings take precedence over the interpretation of the contentful meanings they modify and determine the final conceptual structure of the whole – not the other way round. For instance, the most common interpretation of *car* is BOUNDED. However, in combination with *a lot of*, our understanding of *car* will shift to UNBOUNDED, that is, DEGREE and SCALE. It is not the case that *car* will force a non-gradable reading onto *a lot of*. This does not mean that *car* is polysemous between the two readings, but rather that its meaning is construed in two different ways.

The Construals, given in the third column in Table 1, represent a totally different substance from Ontologies. They are the cognitive processes that operate on the ontological representations in conceptual space and are responsible for the final interpretation of linguistic meaning in context.[4] A system of construals was set up by Croft and Wood (2000: 55–56) to match the construals presented in the cognitive linguistics literature with the cognitive processes from psychology and phenomenology. The Construal operations are special cases of four general cognitive processes, namely (1) *Gestalt* (constitution), (2) salience (focus of attention), (3) comparison (judgement), and (4) perspective (situatedness). The system of Construals in Table 1 is most essentially the same as the system in Croft and Wood (2000),but not identical. The Construals form the dynamic component of LOC, important for our interpretation of different readings of all kinds of linguistic expressions in use. The four classes represent four distinct processes in different realms of experience, which in turn subsume different construal operations as exemplified in Table 1. The four processes are not mutually exclusive, but co-occurring and co-active. The construal, central to the argument of this paper, is salience, that is, metonymization and zone activation which operate on the ontological pre-meanings. The conceptual similarities and the linguistic differences between metonymization and zone activation are dealt with in Section 3.

3. Metonymization and zone activation

On the whole, metonymy has received relatively little attention in the synchronic literature, but has recently experienced an upsurge in interest as this volume is evidence of. It has been discussed both in its own right and in relation to metaphor, e.g., Warren (1992, 2003, 2006), Gibbs (1994, 1999), Papafragou (1996), Kövecses and Radden (1998) Panther and Radden (1999), Radden and Kövecses (1999), Dirven and Pörings (2002), Goosens (2002), Barcelona (2003), Panther and Thornburg (2003, 2007), Ruíz de Mendoza (2003), Paradis (2004/2010, 2008), Haser (2005) and Peirsman and Geeraerts (2006), and in relation to vertical polysemy, i.e., categorical shifts of broadening and narrowing (Koskela, this volume). Metonymization is not restricted to linguistic communication but is also a construal in other communicative modes such as pointing and gesture. For instance, a 3-year old child once visited our house. Pointing to the sofa in the lounge he exclaimed: "Dad?!" Since no man was sitting on the sofa, he concluded that there was no adult male family member. Pointing gestures are precursors of linguistic communication and metonymization is common (Goldin-Medow, 2007; Tomasello, Carpenter and Liszkowski, 2007; Gärdenfors and Warglien, forthcoming). However, the clue to how we as language users cope with contextual flexibility still eludes

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[4] Construals have been described in the cognitive literature by Talmy (2000) in terms of schematic systems, which embrace configurational structure, deployment of perspectives, distribution of attention and force dynamics. Langacker (1987: 99–146, 2000: 3–5) deals with construals under the rubrics of comparison, attention and focal adjustments. The focal adjustments are further subdivided into selection of the facets of a particular scene, the perspective from which a scene is viewed and the level of abstraction or level of specificity. Lakoff and Johnson (1980) treat construals under metaphor.

linguists to a large extent, and contextual readings such as metonymies create problems in computational linguistics where a great deal of effort is currently directed to finding out how such uses can be predicted, e.g., Pustejovsky (1995), Lapata and Lascarides (2003).

Langacker (2000: 199) offers a unitary treatment of metonymy as a reference-point and an activation phenomenon in that "the entity that is normally designated by a metonymic expression serves as a reference point affording mental access to the desired target, i.e., the entity actually being referred to". The scope of such a definition is too unconstrained for a more detailed lexico-semantic analysis. In contrast to Langacker, Peirsman and Geeraerts (2006) suggest a prototypically structured non-unitary definition of metonymy as conceptual contiguity. They take spatial part–whole relations as the core of the category of metonymy along three interacting indicators: (1) strength of contact, that is, going from part–whole over physical contact to adjacency; (2) boundedness, that is, from bounded to unbounded wholes and parts; and (3) from spatial and material domains through spatio-temporal domains such as events, actions and processes and into the domain of assemblies and collections. The definition of metonymy in terms of what they refer to as a "logical" prototype structure is an attractive idea that lends itself to hypothesis formulation for empirical studies of psychological prototypicality. It offers tools for further empirical investigation of the meaning structures but no constraints on the linguistic side of the matter.[5]

Like Peirsman and Geerearts (2006), Paradis (2004/2010) proposes an approach to metonymization as a continuum in the conceptual realm, but her approach to metonymization on the lexical side of the matter differs from theirs. Paradis (2004/2010) presents three examples: (1) *The red shirts won the match*, (2) *The court had to assume that the statement of claim was true* and (3) *I have a really slow car*. All three are reference-point and salience phenomena at the conceptual level. Salience, as she uses the term, refers to the prominence and degree of activation of certain conceptual structures relative to other possible parts in the cognitive network. However, they differ with respect to the degree of conventionalization of the profiling of the lexico-semantic couplings. (1) is an example of metonymization proper, (2) of facetization and (3) of zone activation. Facetization is a squish category that concerns form–meaning pairing occupying the middle range of the continuum between metonymization and zone activation (Paradis, 2004/2010). As stated in the introduction, this study is restricted to metonymization and zone activation. The status and justification for facetization in between those two poles is also discussed in Barcelona (this volume) and Geeraerts and Peirsman (this volume).

The argument behind the distinction between metonymization and zone activation is operationalized through conventionalization and runs as follows. The metonymical expression *red shirts* in (1) denotes RED SHIRTS, which refers to a concrete entity that is linked to the intended referents in their capacity of being PEOPLE ('football players'). The functional role of 'people as players' is highlighted through their red shirts. In metonymization in general, as in (1), one of the concepts, RED SHIRT here, is lexically encoded and thereby foregrounded and focalized. *Red shirts* has the role of providing access to the inferred concept PLAYER, which is being profiled. It is PLAYER, not SHIRT, that is activated in anaphora resolution, e.g., **One of the red shirts came in from the left. It ran towards the goal*, but *One of the red shirts came in*

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[5] Geeraerts and Peirsman (this volume) have developed their approach to metonymization and zone activation further by appealing to "reference", which they seem to use by and large in the same way as I use *conventionalization of profiled meanings that are intersubjectively entrenched* I deliberately avoid the term because of the theoretical burden it carries from objectivist and structural approaches to meaning. I prefer "conventionalization" to reference in particular when constructions impose strong restrictions on readings such as in the case of middle constructions. For instance, in *This wine should drink well for 10-20 years* there are no selection restriction violations because the construction itself demands the set up of participants (Yoshimura and Taylor, 2004; Paradis, 2009a, 2009b).

from the left. He/She ran towards the goal (*cf.* Ruíz de Mendoza, 2003 and this volume). Out of context, "player" and "shirt" represent two different concepts/senses, but in (1) they are used to refer to the same entity by means of a conventional mode of thought triggered by a search for contextual relevance. Metonymization is licensed by pragmatic inferencing (Panther and Thornburg, 2003). Additional examples of metonymizations are *the referee pulled out the yellow card* (Radden, this volume), *How did you get to the airport? I waved down a taxi* (Gibbs, 1994: 327), *She married money* (Warren, 2006: 18), *a topless district* (Gärdenfors, 2000: 117), or *the final whistle* for 'the game is over' (Levin, 2008: 145), in which *pull out the yellow card, wave down a taxi*, *marry money*, *topless district* and *final whistle* are all PART/WHOLE focalizing shortcuts.

The example of zone activation in (3) is similar to metonymization in being a salience phenomenon and a PART/WHOLE construal, but it differs in that the focalized reference point is conventional and for that reason does not require much pragmatic inferencing on the part of the addressee (Paradis, 2004/2010; Koskela this volume). Zone activation is a much more pervasive construal than metonymization proper and concerns all readings on all occurrence of use. It is always the case that only a certain portion of the use potential of lexical items is in focus in linguistic communication. Zone activation happens *within* senses (in monosemy) and does not involve different senses. For instance, in *slow car*, the function role of "performance" is the relevant aspect, but that does not give rise to a situation in which we are dealing with two different senses of *car. Car* is the conventional lexical item for both 'car as artefact' and 'car as performance'. In a similar way, the difference between *tall man*, *lazy man* and *real man* is that the adjectives conventionally activate different zones of the meaning structure of MAN, that is, physical (*tall*), functional (*lazy*) and personality characteristics (*real*) respectively. It is thus crucial for the argument of this paper that metonymization proper is a polysemy phenomenon and concerns different senses, where one of the senses is conventionally associated with the lexical item used, whereas the other sense is inferred.

4. Metonymization and change

The notion of metonymy is by all means not a new notion in the context of variation and change in the historical linguistics literature. On the contrary, it is a commonplace among other notions in both prestructuralist and structuralist work. Nerlich and Clarke (2001: 245) note that "Metonymy has been studied for at least two thousand years by rhetoricians, for two hundred years by historical semanticists, and for about ten years by cognitive linguists." Various classification schemes for types of change have been suggested in the literature. For instance, Paul (1920), Stern (1931), Bloomfield (1933) and Ullmann (1942) have suggested a number of different types of change such as narrowing, widening, metaphor, metonymy, synecdoche, hyperbole, litotes, degeneration, elevation. What most of these scholars aimed to do was to provide descriptions of chains of successive meanings of lexemes and for that purpose they collected them in classes. However, the problem with many of these classification schemes is that they are exactly that, without offering any strong theoretical explanations for change. The classes are like islands, and most classes can be included in one another. Philology and structuralism dominated the study of diachronic change up to the beginning of the 90s, and it was not until the emergence of Grammaticalization Theory (Traugott, 1982; Hopper and Traugott 1993)[6] and Cognitive Linguistics (Sweetser, 1990; Blank and Koch, 1999; Traugott and Dasher, 2005) that we have a usage-based theoretical

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[6] For a critique of different types of grammaticalization research in different linguistic traditions and frameworks during the 20th century, see Rosenkvist (2004).

basis and better tools for the formulation of hypotheses with self-consistently explanatory potential of dealing with meaning flexibility and paths of change.

Following Traugott (1999), I see innovation as driven by and explainable in terms of a speaker-initiated process of strategic choices using general principles of abductive reasoning (i.e., observations in combination with known laws give rise to hypotheses). This type of reasoning hinges on semantic reanalysis and gives rise to implications of innovative uses which may or may not result in change. Conventionalization and change in turn presuppose acceptance of the speech community. I argue that change proceeds from non-conventionalized mapping between lexical items and their readings, construed through a particular focus of attention that is contextually motivated, i.e., change proceeds through metonymization. Change has taken place when a form–meaning pairing has been established for a certain use, and focus of attention is again selected through zone activation. Change is *gradual* and involves robust conceptual boundaries between the established sense and the new sense. Variation within senses is sensitive to constructional and contextual forces, but differences between different readings are *gradient* and involve no substantial boundaries in conceptual space.

The idea of contiguities of meaning profiling (from metonymization through zone activation), relies on the interaction of domains and discourse frames as established in human communication (Benczes, this volume). The structuring component and the component that makes the definition of metonymy operational is linguistic conventionalization, i.e. intersubjective entrenchment.[7] Change presupposes conventionalization of polysemy. The frames associated with particular foci of attention of meanings evoked by words and expressions in language always involve a complex conglomeration of related notions of contentful representations and configurations. There is very little in the literature on what types of meaning structures function as pivots for meaning change in developments in particular within contentful structures. Most treatments concern developments which develop into principally configurational meanings, that is, become grammaticalized and pragmaticized.

In the next two sections I describe the mechanism of metonymization for meaning change from contentful meanings to contentful meaning (Section 5), and meaning change from contentful to configurational meaning (Section 6). Recall again the distinction made between contentful meaning structures and more schematic structures in Table 1). I show that metonymization proceeds across subnotions of THING and subevents and properties of RELATION, as well as shifts and change from THING to RELATION and from RELATION to THING, and change from such mainly contentful meanings into configurations through the foregrounding of, for instance, BOUNDEDNESS and SCALE, which bring us to changes referred to as grammaticalization and pragmatization.[8]

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[7] Traugott and Dasher (2005: 35) also see metonymization and salience as important factors in language change. It should however be noted that salience in their terminology is different from the way it is used here to refer to a cognitive process. In their treatment salience is associated with social value. Initially, people unconsciously adopt a certain meaning and exploit it rhetorically and only later does the change become subject to conscious evaluation. This view is not incompatible with the present view, but it puts the main focus on the interactional side of the process rather than the semiological side.

[8] The question of whether semantic change is primarily a result of metaphorization or of metonymization has been the focus of much research interest. Clearly, metaphorization is an important factor in language change. The scope of this paper does not allow me to discuss the construals of metaphorization at all. Suffice it to say, that in its capacity of being a construal of salience, metonymization is a prerequisite for metaphorization. Reanalysis is the motivating factor for metonymization, while metaphoization is driven by comparison and analogy. Analogy presupposes reanalysis while the reverse is not the case.

5. From contentful to contentful meanings

The semasiological development from contentful into contentful meanings with a mechanistic, metonymical focus is an area where a lot work remains to be done. There is very little in the literature on what types of meaning structures function as turning points for metonymizations and change in developments within contentful structures. This section discusses the semasiological development of the meanings of some lexical items in the directions from RELATION to THING and from THING to RELATION, using the lexical items *crawl*, *crawler*, *key, draft* and the development of "fear" expressions in Greek (*fovame*) and English (*fear, be afraid*). The lexical items are selected to illustrate various focal points of salience in their diachronic development beyond the fairly well described drift from meanings related to physical domains into meanings in the mental world. By doing this, I hope to open up new avenues of research on semantic change. It is likely that there are patternings that have gone missing in previous analyses due to the rather strong research focus on predictions of the directions of change from lexical to grammatical and pragmatical meanings and from physical to mental meanings. It may well be that there is more to the story of variation and change if more consistent corpus investigations across different ontological types were carried out, in particular with respect to change from contentful meanings into new contentful meanings (recall the distinction made between contentful meaning structures and more schematic structures in Table 1).

Firstly, the first instance of the verb *crawl* in the *OED* is from 1300 with the definition "to move slowly in a prone position, by dragging the body along close to the ground, as a child upon its hands and knees, any short-limbed quadruped or reptile, an insect, serpent, worm or a slug", as in (1). It also says that *crawl* probably originated from Norse (cf. Swedish *kravla*) and that it was a rare word, apparently only northern. Consider examples (1) through (6):

(1) The aged Symeon cralls to kyrk. (1460)
(2) A green mantling vine That crawls along the side of yon small hill. (1634)
(3) Sicknesse posteth to us, but crawleth from us. (1654)
(4) Cranmer Hath crawl'd into the fauour of the King. (1613)
(5) You make me crawl all over, talkin' so much about dyin'. (1891)
(6) Mr Krushchev was crawling to Washington. (1966)

In its earliest use, as in (1), six important meaning structures are crucial for our understanding of *crawl*, namely actual MOTION in physical SPACE, presupposing an agentive discourse PARTICIPANT, such as the aged Symeon, slow SPEED, low LOCATION and horizontal ORIENTATION. These substructures, which represent PARTS of the WHOLE of the contentful meaning structures *crawl* construed as a verbal RELATION as in (1), are also involved in the interpretations of the uses in (2) through (6), but at different degrees of salience, fostered in different constructions and, as we shall see, in some cases in terms of their opposites.

In (2), *crawl* denotes concrete movement by a concrete entity, a PLANT, and mental scanning by the conceptualizing speaker. This means that there is no wilful human agent involved in the growth of the plant (MOTION). Due to this difference, a zeugma is created when the two constructions are coordinated: *?Aged Symeon crawled along the path and so did the vine*. This antagonism is evidence of sense difference between (1) and (2). The nature of the discourse participants is an important factor in meaning construal and in this case a sufficiently strong factor to create a zeugmatic effect in coordination.

Furthermore, the expression in (3) provides a description of sickness as an entity that is capable of crawling, in which case the substructure of *crawl* has taken on another shape. We

are in a semi-physical spatial region, where we are supposed to understand the disappearance of the sickness both as an experience in mental SPACE and in terms of a metaphorical 'crawling' feeling in which case the sickness is portrayed as the causing agent. In (5) next, the expression *you make me crawl all over* is similar to (3) in being primarily experiential (UNDERGOER) rather than agentive (ACTOR). The situation described is quasi-EMOTION rather than MOTION, i.e., a sensory perception of a crawling feeling caused by an external agent, who may or may not be aware of the effect he or she has on the experiencer (UNDERGOER). It deserves to be pointed out that the constructions as such in all cases contribute to shape the specific interpretations of the senses and the readings within the senses. The imagined feeling of a crawling creature takes us from MOTION to quasi-EMOTION in a very specific causative construction. The aspects of slow (SPEED), low (LOCATION) and horizontal (ORIENTATION) are all there but out of focus of attention. The interpretations in both (3) and (5) are strongly tied to the rather particular set-up of the constructions in terms of the personification of a STATE as the agentive discourse participant in (3) and the causative construction in (5). These constructional differences indicate that identity tests are not enough, but that other methods have to be used to shed light on formal , and semantic differences of this sort (Gries, 2006, Glynn 2009).

In (4) and (6), the set of pre-meaning structures is the same as in (1) but they are definitely transferred from the physical world to the mental world in the creation of the new senses. Both expressions presuppose a human agent for the mental movement (MOTION), in contrast to EMOTION in (3) and (5). The step from physical SPACE to mental SPACE is a metaphorically motivated construal of comparison. With the agentive mental reading, as in (4) and (6), a clear GOAL emerges and becomes a crucial part of the conceptual set up, namely false subservience. The combination of slow (SPEED), low (LOCATION) and horizontal (ORIENTATION) in mental (SPACE) evoke negativity that comes with UP as emblematic of superiority and DOWN of inferiority and the slow manner of movement on the ground as implicating stealthy, treacherous and insidious motion pertaining to terror-inducing cultural stereotypes such as snakes.

The uses of *crawl* in (1) through (6) above leave us with five reasonably robust sense boundaries created through substructure shifts, with no sufficient boundary between (4) and (6) At the one end we have the meanings with the human agent as in (1) developing into a similar motion pattern for non-human entities such as plants in (2), sickness in (3) and a self-propelled feeling in (5) to the mental movements carried out by human agents in (4) and (6). It deserves to be emphasized again that the constructions as such in all cases contribute to shape the specific interpretations of the senses.

Next, *crawl* came into use as a THING construal in the 19th century for slow creeping motion as in (7), (8) and (9). By way of the THING construal configuration of those form–meaning pairings, they are sufficiently different in terms of conceptual distance from the RELATION 'crawl' in (1) through (6) to be different senses. Yet, the more contentful pre-meaning structures of these nominalizations are the same as in examples (1), i.e., (SPEED), low (LOCATION), horizontal (ORIENTATION), movement (MOTION) in physical space (SPACE) by living creatures (PARTICIPANT):

(7) I rather dislike the crawl of the centipede or slime of snail. (1853)
(8) R. Cavill, who revolutionised all ideas about speed swimming for short distances by introducing a further modification of his style, which was at once termed the 'crawl' stroke. (1903)
(9) We did a "pub-crawl" in Commercial Road and East India Dock Road. (1915)

With the coining of *crawl* for a new swim style (8), the same substructures of meaning as in (7) and (9) are represented, but 'slow' has been substituted with the opposite side of the of the scale of SPEED, namely 'fast', and the activity is necessarily taking place in water.[9] More recently, the leisurely pace of the walk in gin-crawls, beer-crawls and pub-crawls (9) have become faster through motorized pub-crawls. The horizontal orientation of the participants in the crawl has been used in advertising with pictures of people on their hands and knees on their way to another glass. Also, jokes have been created on the basis of orientation, which is evidence in favour of its relative prominence. A travel agency made use of an advertisement saying: *Horizontal holidays: Pub crawls Glasgow.*[10] The uses of the noun *crawl* in (7), (8) and (9) represent three different senses that cannot be substituted for one another in truth-tests. We cannot felicitously say that Bill did the crawl and so did Alan, meaning both doing the swim, crawling on the ground or doing a pub-crawl.

Also, in the development of the nomen agentis *crawler* from *crawl* as RELATION, the semasiological pattern repeats itself. *Crawler* is distinct from both *crawl* as RELATION and THING. The first instance of the use of *crawler* in the *OED* is from 1649 and pertains to crawling creatures such as people, reptiles and insects. Later on, specialized uses referring to humans and artefacts appear, such as cabs moving slowly along the streets in search for fares (1865), and overall garments for children (1891), swimmers doing the crawl-stroke (1912) and later on during the 20th century, vehicles such as crawler tractors. All of those developments make salient the particular functions of slow (SPEED), low (LOCATION), horizontal (ORIENTATION) and movement (MOTION) in physical space (SPACE) by more or less directly agentive discourse PARTICIPANTS.[11] In the mid 1800s, *crawler*, denoting somebody who acts in a servile and despicable way, developed in parallel with the physical meaning for the verb *crawl*, e.g., *that scheming crawler* (1856). In addition to these developments, there is a more recent use of *crawler* (1994) that developed in computing, i.e., a *web crawler* or a *spider*. A *web crawler* is a computer program that visits websites and collects information on the Internet. The focus of attention is on the aspects of SPEED and the GOAL of finding the information searched for. However, being the spider in the web, the *web crawler* is capable of embracing the web and in contrast to most of the other senses it moves fast rather than slowly all over.

Thus, in the semasiological development of *crawl* and *crawler*, six substructures are crucial both for readings within one sense and for the development of new senses. In the case of *crawl* and *crawler*, they are MOTION, SPACE, PARTICIPANT, SPEED, LOCATION and ORIENTATION. In addition to these structures, it has been shown that configuration construals such as either THING or RELATION also create robust sense boundaries. Also, note that PARTICIPANT becomes part and parcel of the THING construal. This is a fact that is taken for granted in most frameworks, but within a cognitive semantics framework such as LOC where meanings are contextual construals upon use, this becomes an issue and has to be taken seriously. There are clearly generalizations to be made from developments of meanings construed as THING or as RELATION and the importance of the functioning of the meaning in the world in a very broad sense. This also highlights the importance of the other side of the of

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[9] SPEED in most of these uses may be modified by "slow" or "fast", relating to its relative reference points. In other words, the reference frame for a crawling baby is SLOW, but within this setting the crawl may be slow or fast, and inversely, FAST is the frame of reference for crawling in water, but again within that frame it may be performed slowly or fast.

[10] http://www.cartoonstock.com/directory/g/glasgow.asp

[11] The reader is referred to Panther and Thornburg (2002) for an account of various different uses of English *-er* nominals and the thematic roles highlighted by them, in the case of the agentive "crawlers" (e.g., reptiles) or the instrumental "crawlers" (e.g., clothes).

the coin, the onomasiological side, that is, what kind of entities and events are named by these words, which is closely connected to the type of configuration construal in terms of THING or RELATION. The scope of this article does not allow me to say anything about that here. For work on the onomasiological side of the matter with reference to contentful meanings, see Geeraerts (1997).

The functioning in the world is of crucial importance to a more recent development of *draft* and *key* as THING in physical SPACE to their uses as property RELATIONS in the mental world, see (10) and (11).[12]

(10) I think my *key point* is going to be this: girls are not wired to do that kind of stuff…
And an even keyer point is the definition of stuff.
(11) This is really *quite draft* at the moment.

In (10) the telic qualia role of "key" is made salient (Paradis, 2005), and, by implication, crucial importance of the function of "key" emerges and receives the focus of attention. This shift from THING to RELATION also takes us to the mental world. *Draft* in (11) has gone through a similar development resulting in a meaning change. In a similar fashion to the change of *crawl* used as RELATION (verb) or THING (nominal), these two uses definitely create a robust enough boundary between the uses as different senses.

Thirdly, in a diachronic study of "fear" predicates in Greek and English, Kitis (2009) outlines the parallel developmental paths through metonymization of *fovame* ("fear") in Greek and *fear* and *be afraid* in English from MOTION in physical space to EMOTION in mental space. Kitis shows that that the evolution of *fovame* in Modern Greek originates from a strongly agentive transitive verb meaning 'put to flight' in Homer's *Iliad* in Ancient Greek. Homer also used the same verb in the passive 'to be put to flight' and in the middle 'flee in terror'. In all three constructions there is a contingent association with a feeling of fear and terror which becomes central to and focalized through metonymization in its later EMOTION sense of being frightened only. Kitis shows how the fleeing sense developed into the fear sense through metonymization, i.e., conventionalization of the focus of attention on FEAR. The actual separation of 'fleeing' and 'fright' is nicely captured in an example where the MOTION and the EMOTION are rendered by two different lexical items ("having been frightened, the strangers fled", example 19 in Kitis, 2009). The definite change from MOTION in physical space to EMOTION originated in the middle construction where the affected object, i.e., the experiencer is the primary discourse PARTICIPANT and the consequent degree of transitivity ranges in the middle.[13]

As evidenced by both Kitis (2009) and Tissari (2007), the meaning of the "fear" predicate changed through metonymization from EMOTION into the interpersonal SOCIO-COGNITIVE EPISTEMIC sphere as a regulator of communication both in Greek and in English in expressions such as *I fear it is too late now*. The role of *I am afraid* is not to express fright, but rather to preface an unwelcome view. Morphosyntactically, this development is aided by the fact that the complementizer clause becomes upgraded to "main clause status" and the

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[12] The examples are borrowed from Denison (2007); italics are added by CP.

[13] The flow of transfer of activity is described for English middles in Kemmer (1993) and Paradis (2009a). The ontological prerequisites for property ascription through zone activation in the middle construction are described by Yoshimura and Taylor (2004) and Paradis (2009b). The middle is accounted for in terms of an underlying high-level metonymic shift involving PROCESS FOR ACTION FOR RESULT by Ruíz de Mendoza and Mairal (2007: 46).

more flexible position of *I fear*, as in e.g., *It is too late now I fear.*[14] The development of the EMOTION meaning of *I fear (that)* and *I am afraid (that)* into EPISTEMIC markers in intersubjective uses of *I fear* and *I am afraid* are accounted for in detail by Tissari (2007). Both Kitis and Tissari describe the pragmatization of emotional *fear* as a contingent implicated cause-and-effect relationship between fear and avoidance. In the final stage of the semasiological development of the "fear" meanings, we have crossed the border between primarily contentful meanings and primarily configurational ones. It is to the topic of the crossing of this line that I now turn.[15]

6. From contentful to configurational meanings

There is an extensive literature dealing with the semasiological development of meanings of lexical items from contentful to configurational meanings (e.g., Hopper and Traugott, 1993; Traugott and Dasher, 2005).[16] A particularly popular area of research has been the development of various types of scope-taking adverbials from contentful meaning structures (e.g., Ungerer, 1988; Nevalainen and Rissanen, 2002; Traugott, 2006, 2007) and the development of expressions foregrounding DEGREE configurations from various contentful sources (Peters, 1993; Paradis, 1997, 2000a, 2000b, 2008; Traugott and Dasher, 2005; Méndez Naya, 2008a[17]). In order to provide support for my claims concerning change from contentful to configurational meanings, I will make use of a couple of diachronic studies related to the domain of DEGREE.

In contemporary English there is a number of reinforcing adjectives that can be shown to have developed DEGREE meanings through metonymization of BOUNDEDNESS and SCALE configurations at the expense of content proper, e.g., "*absolute* bliss", "a *complete* bitch", "a *perfect* idiot", "*total* crap". In combination with nominals such as *bliss*, *bitch*, *idiot*, *crap*, *nonsense*, *pleasure*, *mess*, *coward*, *muddle* and *bore*, the above adjectives are all interpreted as modifiers of DEGREE (Paradis, 2000b). The development of the reinforcing senses of the adjectives is relatively recent in the history of the English language. Most of them developed this reading during the Early Modern period. Historically, *complete*, *perfect*, *total* and *absolute* all share a content dimension of 'completeness'. *Complete* comes from 'having all its parts', 'entire', 'full', *perfect* from 'completed', 'accomplished', *total* from 'relating to the whole of something' and *absolute* was originally a participle meaning 'disengaged from' and 'free from imperfection', which later came to be used in the sense of 'complete degree'

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[14] This pattern is found in the context of other verbs as well, *I think* (e.g., Aijmer, 2009; Boye and Harder, 2007, 2009) or the role of complement clauses for intersubjectivity in discourse (Verhagen, 2006).

[15] In a similar fashion to the tracing of the development of 'fear' in English, Tissari (2008) investigates the development of *respect* (as a noun and as a verb) from the physical domain of visual attention through the mental attention to textual attention and again the regulation of communication. Also in the context of *respect* she points up the chain of metonymization as the vehicle that takes us from physical VISION and COGNITION to EMOTION and SOCIO-COGNITION and interpersonal relations in expressions such as *with respect to* and *in respect of* in text and discourse. See also Sweetser (1990) for development from VISION and COGNITION.

[16] Much work has also been carried out on meaning shifts and change from configurational to configurational, (e.g., Jucker, 1995; Brinton, 1996; Buchstaller and Traugott, 2006; Ekberg, 2007, forthcoming). While assuming that such developments also come about through metonymization, I will not discuss such changes at all due to space limitation.

[17] Méndez Naya (2008a) is a Special Issue on English Intensifiers with contributions by González Diaz (2008), Lenker (2008), Méndez Naya (2008b), Nevalainen (2008), Paradis (2008), Rissanen (2008) and Tagliamonte (2008).

through implication and metonymization of its configuration. As degree modifiers *complete*, *perfect*, *total* and *absolute* all foreground the configuration of BOUNDARY. [18]

In contrast to the adjectivals expressing totality and BOUNDEDNESS, there is another set of adjectives, *awful*, *dreadful*, *horrible* and *terrible*, which exhibits the same kind of development from contentful to configurational. In contrast to the first set in which the member are associated with a BOUNDARY, the members of this set are all associated with a SCALE structure. *Awful*, *dreadful*, *horrible* and *terrible* are all expressive of content structures that are based at the extreme end of a scalar structure. They were originally associated with 'awe/dread/horror/terror-causing', all of which highlight an extreme point on a scale of 'content X'. For instance *a terrible dragon* is a dragon that causes terror. Like *absolute*, *complete*, *perfect* and *total,* they were also recruited to DEGREE modification by implication in combination with meanings that were potentially scaleable single property content structures with a relatively salient SCALE reading. That is, in combination with nominals such as *mess*, *coward*, *muddle*, and *bore* as in *an awful mess*, *a dreadful coward*, *a horrible muddle* and *a terrible bore*. In LOC, the process of grammaticalization translates into a development from content to configurational structures, not the other way round.

None of the above adjectives in these combinations elaborate a property associated with the content structure of their nominal heads as such in combination with nominal heads that construe properties as THING. For instance, it is not the case that the bore causes terror. The function of *terrible* is to specify a range of the scale with which the meaning of "bore" is associated. Again, this is made possible through metonymization whereby the superlative content component of "terrible" is generalized into 'high degree'. As a modifier of DEGREE, *terrible* are neither felicitous in comparison nor in predicative use: *He is the more/most terrible bore* or *The bore is terrible* (referring to a person). The role of *terrible* is to highlight and reinforce the DEGREE of 'boredom' in *bore*. The contentful side of *terror* has changed and the scalar template has become predominantly salient. In other words, 'terror-causing' is metonymically related to 'high degree' through the backgrounded SCALE configuration, which, in turn, gives rise to the DEGREE reading and the foregrounding of the SCALE configuration of *terrible* in contexts such as *a terrible bore* or *a terrible nonsense*. Change took place when the 'high degree' reading of *terrible* became conventionalized in combinations such as *terrible bore*, and the construal became one of zone activation and not metonymization, i.e., the relationship had become conventionalized rather than construed on the fly to fit more *ad hoc* contextual needs.[19]

What all the reinforcing adjectives have in common is a conceptual substructure that lends itself to developing a DEGREE sense. Their various contentful structures, in terms of 'totality' and 'extremeness', are such that they can be used for grading. Also, their meanings are all either BOUNDED or SCALE configurations, albeit initially as backgrounded structures. The configurational schema underlying *absolute*, *complete*, *perfect* and *total* is a definitive BOUNDARY and the schema that structures *awful*, *dreadful*, *horrible* and *terrible* is SCALE. When the above adjectives were recruited as reinforcers, DEGREE was made prominent and their main role was to modify the gradable property expressed by the noun with respect to

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[18] Note that although from slightly different contentful sources, the adjectives form a paradigm of DEGREE modifiers with, by and large, the same function. This is also true of the adverbial degree modifiers and of other operators such as focusing adverbs (Nevalainen, 1991).

[19] In addition, what is clear from all the examples of reinforcing adjectives is that they prefer indefinite constructions. This suggests that change is fostered in constructional straitjackets – an observation which is true of all developments from contentful to contentful meanings as well as from contentful to configurational meanings and from configurational to configurational meanings (Paradis, 2000b: 249; Heine, 2002; Traugott, 2003; Eckardt, 2006; Ekberg, forthcoming).

DEGREE. This reading gained speaker acceptance and change took place through metonymization involving two different senses in all cases. Their incompatibility in identity tests is a symptom of polysemy **The dragon was terrible and so was the bore*. Once change has taken place and the use of these adjectivals has been conventionalized, the reading of an expression such as *a terrible bore* is a case of zone activation as is the case in *the terrible dragon* where the focus of attention is on the 'terror' content as such.

The relationship between reinforcing adjectives and their nominal heads is comparable to the relationship between reinforcing adverbs and their adjectival head, e.g., *absolutely pure*, *awfully messy*, *totally free*, *completely disastrous*, *really competent* and *terribly boring*. The difference between *awful mess* and *awfully messy* is one of configuration construal of *mess* as THING, while the configuration of *messy* is one of RELATION (Paradis, 2005, 2008). Similar to adjectival DEGREE modifiers, adverbal DEGREE modifiers also developed their grading functions from content–foregrounding form–meaning couplings to couplings that foreground configuration. For instance, the boosters *awfully*, *frightfully*, *terribly*, *horribly*, *really*, *dead, jolly* and *very* have developed into DEGREE operators from content foregrounding meanings and the same is true of the moderators and downtoners *quite*, *rather*, *pretty*, *fairly* and *a bit*, and the maximizers *absolutely*, *quite*, *totally*, *perfectly, right* and *completely* (e.g., Stoffel, 1901; Borst, 1902; Brugman, 1984; Peters, 1993; Paradis, 1997: 71–76, 2000a, 2000b, 2003, 2008; Nevalainen and Rissanen, 2002; Méndez Naya, 2003, 2007, 2008b; Traugott 2006, 2008a).

It has been shown again that focus of attention is operative in various meaning construals, and also that constructions play an important role in fostering change and probably also in creating the basis for analogies such as for the various DEGREE modifier paradigms such as *awfully, horribly*, *frightfully*, *terribly*, and for modifiers such as *a bit of*, *a piece of*, *a shred of* (Traugott, 2008b). What is characteristic of the path of development of DEGREE meanings is the conceptualization of the message as increasingly strongly grounded in the situation and thereby more (inter)subjective (Traugott, 1995; Traugott and Dasher, 2005; Ekberg, forthcoming).

7. Conclusion

This paper offers a unitary approach to the mechanism of variation and change in language within Lexical Meaning as Ontologies and Construals (LOC). The basic assumption that the model rests on is that meanings of words are emergent and formed by construals operating on their use potential on all occasions of use. There are no stable inherent word meanings. This paper has centred on two types of construals which are crucial for explanations of the difference between change and shifts, namely *metonymization* and *zone activation*. These construals are similar in that they are both based on PART–WHOLE configurations that profile salient aspects in a given context. However, they differ with respect to the conventionalization of the profiled meanings. Metonymization is a construal that operates *between* senses, while activation of zones operates *within* senses.

I have argued that metonymization is instrumental in the development of all new meanings in language change irrespective of whether they involve developments from primarily contentful into primarily configurational meaning types, or whether they concern developments of form–meaning pairings within each of these two types of structure. The framework of LOC predicts semantic change from primarily contentful to primarily contentful meanings, from primarily contentful meanings into primarily configurational meanings and from primarily configurational to primarily configurational meanings. In this framework, grammaticalization is the latter developments. Metonymization involves the use of a lexical item to evoke the sense of something that is not conventionally linked to that particular lexical item. It is an implied relation that precedes change and involves novel uses of form–meaning pairings, in which case the connection between lexical items and their meanings has not yet been conventionalized. Conventionalization and change require socio-cognitive entrenchment of the metonymical readings and acceptance within the speech community, and change has taken place when conventional form–meaning pairings have been established for certain uses and focus of attention is again selected through zone activation.

In the process of meaning change, there is a continuum from metonymy to zone activation, i.e., from non-conventionalized couplings between form–meaning pairs (polysemy) to conventionalized form–meaning pairings and zone activation within senses. While variation in monosemy is fluid and gradient, change presupposes polysemy, occurs by semantic leaps and is gradual. The full understanding of the nature of the ontogeny and phylogeny of lexico-semantic knowledge is dependent on a better understanding of the use of that knowledge with reference to various encyclopaedic frames or domains, construals, constructions and collocations. Such insights are likely to be obtained through investigations of the mechanism of shifts and change in terms of the relative salience of meaning structure accommodated under the negatively formulated assumption that there are no absolute and stable meanings.

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