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Paradis, Carita

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Where Does Metonymy Stop?
Senses, Facets, and Active Zones

Carita Paradis
Department of English
Lund University, Sweden

The purpose of this article is to propose a constrained lexical semantic definition of referential metonymy within a model of meaning as ontology and construal. Due to their various types of lexical–referential pairings, 3 types of construals that are frequently referred to as metonymy in the cognitive literature are distinguished as *metonymization, facetization,* and *zone activation.* 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 argued that metonymy is a contingent relation that stops at the sense level. Facetization and zone activation both involve the use of conventional pairings of lexical items and contextual readings. Facetization takes place within senses at the level of qualia structure and zone activation takes place within qualia structure. Zone activation is a ubiquitous phenomenon that concerns all readings, senses as well facets.

Traditionally viewed, metonymy is a figure of speech in discourse used for rhetorical effect. It is a stylistic language operation that makes use of the name for one thing for that of something else. For instance, in *"there were a lot of new faces at the party,"* the word *faces* is the name used to refer to people in this particular context. With the advent of cognitive linguistics, completely different assumptions were made about the nature of metonymy as well as metaphor (Gibbs, 1994; Lakoff, 1987; Lakoff & Johnson, 1980). The contention within cognitive linguistics is that there is nothing figurative about figures of speech as such. Metonymy and metaphor are not primarily linguistic ornaments but basic cognitive processes that are pervasive in both thought and language. Metonymical expressions in language have cognitive status in being used in reasoning, and they are suggestive of

how we as human beings conceive of entities and events within conceptual frames. Over the years, metonymy has received much less attention than metaphor in the literature but has recently experienced an upsurge in interest. It has been discussed both in its own right and in relation to metaphor (e.g., Barcelona, 2000; Dirven & Pörings, 2002; Panther & Radden, 1999; Panther & Thornburg, 2003; Warren, 1999, 2002), and the role of figurative language has also been dealt with in the light of language processing and understanding (e.g., Frisson & Pickering, 1999; Gibbs, 1994, 1999; Giora, 1997, 2002; Giora & Fein, 1999; Papafragou, 1996).

According to Langacker (1999), metonymy is 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" (p. 199). The scope of such a definition is too unconstrained for a more detailed semantic analysis. The clue to how we as language users cope with contextual flexibility still eludes 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 various contextual readings can be predicted. A better understanding of the conditions for linguistic flexibility and language use is a prerequisite for work with authentic language that involves interpretation and generation. The following three examples that match Langacker's definition of metonymy and that occur in the cognitively oriented literature as metonymical expressions have been selected as a starting point for an examination of their various lexico-semantic patterns.

(1) The red *shirts* won the match.
(2) The *court* had to assume that the statement of claim was true.
(3) I have a really slow *car.*

Following Langacker (1999), I argue that these examples are all reference point and activation phenomena. More accurately, I maintain that they are similar in being construals of salience based on a part–whole configuration.[1] However, I also argue that none of these examples are on a par with one another with respect to the relation between their profiled readings and the conventional pairings of senses and lexical items, respectively.

The purpose of the article is to provide a more constrained lexical semantic definition of referential metonymy. I share the view with Gibbs (1994), Lakoff (1987), and the authors in Panther and Thornburg (2003) that metonymization is a phe-

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[1]Salience in this article is defined as a construal of focus of attention (Croft & Wood, 2000; Langacker, 1999), which is different from meaning salience through frequency, familiarity, and conventionality as in Giora (1997, 2003) and feature salience as in Ortony, Vondruska, Foss, and Jones (1985).

nomenon underlying much ordinary thinking and reasoning operative on conceptual structures that are variously called domains, idealized cognitive models (ICMs), scripts, and scenarios.

LEXICAL MEANING AS ONTOLOGIES
AND CONSTRUALS

The cognitive approach to meaning advanced in this article takes concepts to form the ontological basis of lexical knowledge, which involves both encyclopedic and linguistic knowledge. The meaning of a lexical item is its use potential in conceptual space. Specific readings are portions of the use potential and are construed on the occasion of use. Conceptual space is structured relative to two types of ontological domains: the content domain and the schematic domain (Cruse & Togia, 1996; Paradis, 2001, 2003). *Content domains* involve meaning proper and *schematic domains* provide various configurational templates. Both these domains are conceptual in nature and mirror our perception of the world. In addition to the conceptual realm, there is an operating system consisting of different types of *construal*, which are imposed on the domains by speakers and addressees on the occasion of use. They are not themselves conceptual, but ways of structuring conceptual domains, reflecting some broad basic cognitive abilities, such as the focusing of attention (salience), the choice of configuration (Gestalt), the selection of speaker perspective, and the ability to make comparisons (Croft & Wood, 2000). It is through the operations of construals on the ontological material that meanings of lexical expressions arise.

Conceptual ontologies and construals are the prerequisites of all kinds of reading difference. In this particular case they form the basis for the distinction among senses, facets, and active zones. Metonymy in the cognitive literature is modeled as ICMs by Lakoff (1987), conceptual mappings by Radden and Kövesces (1999), domain highlighting by Croft (2002), combinations of mappings and highlighting by Ruiz de Mendoza Ibáñez (2000), scenarios by Panther and Thornburg (1999), and more generally as reference point activation by Langacker (1999). My theory of meaning as ontology and construal does not preclude any of these aspects. On the contrary, processes of highlighting of aspects of encyclopedic knowledge and situational scripts are central in any cognitive study of meaning, but the focus of this article is to present a more constrained approach to mappings between our knowledge of lexical items and their use potential. This theory of meaning does not preclude a pragmatic analysis in terms of inferencing and relevance either (Panther & Thornburg, 2003; Papafragou, 1996). Contextual relevance is assumed to be the driving force for the reasoning behind construal operations of various kinds. The ultimate goal of an empirical study of lexical meaning based on ontologies and construals is to identify systematic patterns between words and meaning in use to be able to better understand how it is at all possible to cope with linguistic flexibil-

ity in language use. Metonymization, facetization, and zone activation are important parts of a solution to this problem.

Ontological Foundation for Zone Activation, Facetization, and Metonymization

The ontological basis of lexical meaning is not directly related to the world but to how humans conceive of the world. The ontologies serve as the semantic foundation of the model. They involve both (a) what things are (content ontologies), and (b) how they are configured (schematic ontologies), and they are the material on which construal operates on the occasion of use. Ontological structures are motivated as the explanatory basis for various pairings of lexical items and their contextual readings in this semantic model. The ontological basis of nominal meanings, in this case, constrains the interpretation of the adjectives (and vice versa). In an experiment, Murphy (2002) asked participants to provide defintions of nouns and adjectives. *"Open"* was used in some of the test items. The interpretations of *"open"* given by the informants were for instance *"open hand"* (cards dealt face up), *"open world"* (full of opportunities and choices), *"open house"* (period of time when people can drop by to visit), and *"open problem"* (having many solutions).

Content ontologies.   I assume a tripartite distinction of nominal content structures as top ontologies: first-, second- and third-order entities.[2] First-order entities are physical objects such as *"ANIMALS," "PEOPLE," "PLANTS,"* and *"ARTEFACTS"* (e.g., *"dog," "woman," "tulip,"* and *"car").* These entities are relatively stable from a perceptual point of view. They exist in three-dimensional space, at any point in time, and they are publicly observable.

The ontological status of both second- and third-order entities is more vague in the sense that they are not associated with as many stable properties as first-order entities. They are more variable and therefore also more difficult to define and more controversial. Second-order entities are *"EVENTS," "PROCESSES,"* and *"STATES,"* such as *"victory," "discussion,"* and *"knowledge,"* respectively. These entities are located in time and are said to occur rather than exist. Finally, third-order entities are abstract entities that are outside both space and time. They are entities such as *"facts," "concepts," "ideas," "possibilities,"* and *"propositions,"* referred to as *"SHELLS"* in this article.[3] The content structures are summarized in Table 1.

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[2]The terms first-, second-, and third-order entities are from Lyons (1977, pp. 442–445).

[3]The term *"SHELL"* is borrowed from Schmid (2000). The problems of ontological methodology have been discussed by Poli (2002), among others. The idea of ontologies has also been elaborated by word net projects such as the Princeton WordNet (http://www.cogsci.princeton.edu/~wn/), the Euro WordNet (Vossen et al., 1997; http://www.illc.uva.nl/EuroWordNet/docs.html), and FrameNet (http://www.icsi.berkeley.edu/~framenet/), but this work has not resulted in widespread agreement on this topic.

TABLE 1
The Trichotomy of Conceptual Ontologies for Nominals
and Their Subcategories

Top Ontologies	Subcategories
First-order entities	*"ANIMAL," "HUMAN BEING," "PLANT," "ARTEFACT," "NATURAL OBJECT," "SUBSTANCE," "LOCATION"*
Second-order entities	*"EVENT," "PROCESS," "STATE"*
Third-order entities	*"SHELL"*

Configuration of nominals. A schematic representation of nominals that applies to all content structures is qualia structure, which is a kind of a part–whole configuration. The observation that noun meanings are based on a structure of qualia roles was first suggested by Aristotle, and this insight was brought to the fore again in contemporary linguistics by Pustejovsky (1995). In recent years, the idea has been employed by other scholars such as Jackendoff (2002), Cruse (2000), Warren (2003), and Paradis (in press). In the models of Pustejovsky, Jackendoff, and Warren, qualia structure is linguistic information about words in the lexicon, whereas Cruse and Paradis considered qualia structure to be conceptual in nature. The four qualia roles are the *formal,* the *constitutive,* the *telic,* and the *agentive* roles. They encode information about constituent parts, taxonomic relations, functions, and modes of creation, respectively. In this analysis, the formal and the constitutive qualia have been conflated into *constitution* and the telic and agentive into *function.* Consider these roles for *"CAR"*:

CAR
 (i) Constitution: Vehicle consisting of parts such as engine and wheels.
 (ii) Function: Built in a factory, used for driving.

The constitution role involves static aspects such as an entity as an object. For instance, *"CAR"* is a *"VEHICLE"* that has an engine and four wheels and so on. In an expression such as *"a blue car,"* the constitutional role is highlighted. The active zone of *"blue car"* is more precisely the coach. The function role of *"CAR"* involves dynamic aspects. In an expression such as *"slow car,"* the function role is in focus. *"CAR"* can be used for *"fast driving"* and *"slow driving."* The active zone is more precisely performance. Zone activation takes place at the level of qualia structure and within different qualia. It is omnipresent in readings of all kinds. The focus on either of the two qualia does not produce a zeugma in constructions. For instance, *"the car is slow but it is elegant"* is perfectly acceptable, even though *"slow"* activates the function of *"CAR"* and *"elegant"* its constitution. The focus on either of these qualia presupposes a part–whole configuration.

The fact that entities have both a constitution and function side to them is important for the inferences we are able to make when we interpret their contextual uses. In spite of their importance for a dynamic usage-based model of meaning in general and adjective–noun combinations in particular, functional properties have received very little attention in the literature (Gärdenfors, 2000, p. 102).

As already mentioned, qualia configuration and zone activation apply to all nominal meanings in all contexts. Like *"car,"* the qualia of *"shirt"* may be viewed with the focus of attention on either its constitutional or its functional qualia role.

> SHIRT
> (i)   Constitution: Textile object.
> (ii) Function: Used for body protection.

For instance, *"You could borrow my striped shirt"* focuses on *"shirt"* as an object, whereas *"I need a cool shirt today because it is sizzling hot"* focuses on an aspect of the function of *"shirt."* The metonymical reading of *"shirt"* in *"The red shirts won the match"* calls up a different functional quale due to the contextual forces.

> SHIRT
> (i)   Constitution: Textile object.
> (ii) Function: Used to distinguish the players from the other team.

The metonymical reading of *"shirt"* is invoked by the special function role that is highlighted in the context of a sports event. This means that not only is there a discrepancy between the conventional and metonymical senses of *"shirt,"* but there is also a very special function of *"shirt"* in this context that contributes to zooming in on the contextual reading.

Cruse (2000, 2003) pointed out that some lexical items call up more than one set of qualia roles (or perspectives in his terminology). They are called *facets* of meaning.

> (4)   Please put the book back on the shelf (*"TOME"*)
> (5)   I find this book unreadable (*"TEXT"*)

The two facets of *"book"* in (4) and (5) draw on two different ontologies, which form two different Gestalts. The two facets are associated with the conventional use potential of *"book."* Facets differ from senses, such as *"shirt"* and *"player"* in (1) in that they do not produce a zeugma when coordinated. Cruse (2000) gave the following example: "Put this book back on the shelf; it is quite unreadable" (p. 114). The coordination of these two propositions does not produce any antagonism between them. *"It"* (*"TEXT"*) in the second part of the sentence refers nicely back to *"book"* (*"TOME"*) in the first part. This anaphoric relation can be compared to

"There were a lot red shirts in the field. They were all friends of Bill's," in which case *"they"/"PLAYERS"/"PEOPLE"* in the second sentence is not coreferential with *"shirts"/"SHIRTS"* in its conventional reading as *"ARTEFACT."* The anaphoric breakdown is indicative of a mismatch of the conventional mapping between *"shirt"* and *"SHIRT"* and the unconventional mapping between *"shirt"* and *"PLAYER."*

In spite of the fact that facets do not show signs of antagonism in anaphoric reference, their qualia are different due to the facets forming two different Gestalts. Consider this difference for the two readings of *"book"*:

TOME
 (i) Constitution: Object made of paper with cover and pages.
(ii) Function: Was printed and bound.

TEXT
 (i) Constitution: Information, chapters, paragraphs, sentences.
(ii) Function: Was written, to be read.

The two facets of *"BOOK"* are thus construed according to different schematic configurations of the whole use potential of the lexical item *"book."* Like *"book,"* *"court"* is based on different facets (i.e., *"ADMINISTRATIVE UNIT,"* *"BUILDING,"* *"INTERIOR OUTFIT,"* and *"PEOPLE/STAFF"*). Each facet in turn has its own set of qualia:

ADMINISTRATIVE UNIT
 (i) Constitution: The judiciary organization.
(ii) Function: Provide the framework for the proceedings.

BUILDING
 (i) Constitution: Building, roof, walls, doors, windows.
(ii) Function: House the activities.

INTERIOR OUTFIT
 (i) Constitution: Objects that are inside the building.
(ii) Function: For convenience and as work tools.

STAFF
 (i) Constitution: Judiciary employees.
(ii) Function: Take care of injunctions and decisions.

Different facets of the meaning of lexical items such as *"book"* and *"court"* are components of what is expressed by the words *book* and *court,* respectively. The

facets are not normally expressed through separate lexical items in English. Each facet may be expressed by a compound noun such as *courthouse* or *court chambers.* Facets are assumed to be aspects of the same concept or sense, whereas *"shirt"* and *"player"* are different senses and as such are separated by boundaries in conceptual space (Cruse, 2003, pp. 101–119).

THE CLAIM

My proposal is that only (1), *"The red shirts won the match,"* is a case of metonymization proper. *"SHIRT"* and *"PLAYER"* represent two distinct senses that, out of context, evoke the idea of two different entities associated with two different lexical items. In the context given, the relation between the entities is contingent and the contextual reading of *"shirts"* is *"players wearing red shirts."* *"Court"* in (2), *"The court had to assume that the statement of claim was true,"* on the other hand, differs from *"shirt"* in (1) in that the use potential of *"court"* conventionally covers at least four entities, namely *"ADMINISTRATIVE UNIT,"* *"BUILDING,"* *"INTERIOR OUTFIT,"* and *"PEOPLE/STAFF."* Any of the four readings may be distinguished in context, and, inversely, all of them may be jointly referred to without discrimination. In (2) the salient reading of *"court"* is *"PEOPLE/STAFF."* The term used to refer to such aspects of meanings is *facet,* and the process of a construal of salience operating on facets is called *facetization.*[4] Facets are readings within senses. They are conventionally activated by one and the same lexical item. In this respect they differ from *"shirt"* and *"player,"* which are two different lexical items that conventionally activate two different senses. Finally, *"a slow car"* as in (3), *"I have a really slow car,"* is a case of zone activation. *"Slow car"* activates the function role of *"CAR."* Zone activation is different from both metonymization and facetization in being a highly general phenomenon that applies to senses as well as facets. As in facetization, there is a conventional pairing between the lexical item and the possible interpretations (i.e., *"car"* as an object and in its purposive function role). It seems correct to assume that metonymization involves a heavier workload in terms of inferencing based on contextual relevance, because we are dealing with different senses conventionally referred to by different lexical items than in the case of facetization and zone activation where the pairing of lexical items and readings is conventionalized.

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[4]The term *facet* is taken from Cruse (1995; see also the earlier section "Lexical Meaning as Ontologies and Construals"). However, he applied the term to the meaning of *"book,"* but not to meanings such as *"court."*

TABLE 2
Three Different Readings of *shirt* in Context

Context	Content	Configuration
I washed my *dirty shirt*	*"ARTEFACT"*	Constitution
I put my *cool shirt* on	*"ARTEFACT"*	Function
The *red shirts* won the match	*"PEOPLE"*	Function

CORPUS DATA

The idea advanced in this article is based on a discovery that I made in the course of investigating patterns of readings of nominals in adjective–noun (ADJ–N) combinations in general in English on the basis of ontologies: content and configuration. The purpose of that investigation was to chart the various readings of the combining nouns and adjectives to be able to make claims about their use potential, the patterning of their readings in context, and the expected central role of ontologies and construals in the organization and functioning of meanings. A clear distinction between lexical items and their meanings as two different substances was crucial for the investigation as well as for the argument of this article.

A random selection of 2,720 ADJ–N combinations was extracted from the spoken part of The International Corpus of English—The British Component (ICE-GB) corpus (approximately 1/10 of the total number of ADJ–N combinations in the spoken part of the corpus). The corpus is balanced with respect to text types. The ADJ–N combinations were automatically retrieved from the word class tagged corpus.[5] All nominal readings were identified with respect to ontological content and configuration, along the lines of *"shirt"* in Table 2.

Table 2 shows that *"shirt"* in *"I washed my dirty shirt'* refers to an *"ARTEFACT"* and the constitutional quale is in the foreground, whereas in *"I put my cool shirt on"* the function quale is highlighted. In *"The red shirts won the match,"* *"shirt"* does not refer to the *"ARTEFACT"* but to *"PEOPLE (PLAYERS)"* with focus on their function quale. Construals at the level of qualia structure (zone activation) are omnipresent and that is why they are not given a special section in this article. Across all the ADJ–N combinations that constitute our whole corpus of data, 53% of the concrete first-order entities foreground function. For second- and third-order entities the corresponding figures are 87% and 86%, respectively. Obviously, these figures are approximations, because there are no hard and fast ways of determining this.

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[5]For more information about the corpus see Nelson, Wallis, and Aarts (2002) and http://www.ucl.ac.uk/english-usage/ice/

What emerged very clearly from the corpus data was the patterning of the lexical items and their conventional, contextual readings (facetizations) and purely contextual readings (metonymizations). Table 3 shows that 20 (1%) combinations are metonymizations and 90 (3%) are facetizations. Among the metonyms, 14 occurrences make use of first-order entities to refer to either other first-order entities (seven cases) or second-order entities (eight cases), one second-order entity refers to a third-order entity, and four third-order entities refer to first-order entities.

Clearly, it is not possible to make any interesting quantitative claims regarding the patterns within metonymization and facetization based on these 2,720 ADJ–N combinations. What the data show is that the distribution of metonymizations and facetizations in spoken language amount to 1% and 3%, respectively, which tells us that both contsruals are relatively infrequent and facetization is more common than metonymization. To arrive at reliable generalizations about different contextual readings of lexical items in general and about metonymzation and facetization (and zone activation) in particular, we need to make use of large corpora.

For natural language models of understanding and processing within computational linguistics, both content and configurational ontologies are important components, as are inferences from knowledege and belief models. For instance, Porzel and Gurevych (2003) showed that the use of ontolgies and belief networks can be successfully employed in measuring contextual coherence. *"Museum"* is used as an example when calculating contextual fitness of the various readings of the lexical item with the combining verbs *visited, moved, was renovated,* and *bought* as in *"Goethe often visited the historical museum," "The Palatine museum was moved to a new location in 1951," "The apothecary museum was renovated in 1983,"* and *"In 1994 the museum bought a new Matisse."* The inclusion of lexical, semantic, and pragmatic matching in language processing systems makes them more useful for handling conversational input in complex dialogue systems. Porzel and Gurevych did not discuss from where the information about the potential ontological and schematic structures of lexical items is to be retrieved. It seems clear, however, that large machine-readable corpora would be the natural source for building knowledge banks to further develop automation of semantic analysis and machine learning methods to be used in text mining and interpretation.

In the next two sections, metonymization and facetization are discussed in more detail. Most of the examples are from the corpus, but there are also a few that are

TABLE 3
The Numbers and Percentages of Metonymizations and Facetizations in
the Spoken Part of the ICE-GB Corpus.

Readings	Metonymizations	Facetizations	Other	Total
Numbers (%)	20 (1%)	90 (3%)	2,610 (96%)	2,720 (100%)

encountered elsewhere. They are included for want of suitable examples in the data. The examples from the ICE-GB corpus are followed by an asterisk.

METONYMIZATION

As I have argued in previous sections, metonymization involves an expressed lexical item that evokes the idea of a nonconventional, although contextually motivated, reading. This means that with respect to naming there is no lexically encoded conventional overlap. The interpretation is made possible by a conventionalized mode of thought. Out of context, there are no lexico-semantic generalizations across the two senses (i.e., we do not store *"shirt"* meaning player in memory). The generalizations made are of an inferential nature based on world knowledge and the part–whole schema.

Some metonymies are directly derived from the core of the concept itself, whereas others are more peripheral and situationally induced. Like all other construals of salience, metonymies are guided by world knowledge and contextual relevance. For instance, I once sent an e-mail to our information technology (IT) manager to ask for help because my home page did not seem to be available. I wrote the following to him:

(6)   Please, have a look at the departmental home page … *I* have disappeared.

I received a reply to my e-mail, saying that I was rescued and back in place (i.e., not me but my home page on the Web). In this context, *"I have disappeared"* is straightforward and easy to understand. In that particular context, the lexical element *"I"* was used as shorthand for the intended concept *"my personal home page on the departmental Web site."* The IT manager expects mail to his work address to be concerned with IT-related matters, which made the interpretation of my message immediately transparent to him. The relationship between *"I"* and *"home page"* is an example of the whole for a part. The part for the whole in *"good heads"* in (7) is also to some extent dependent on the context, but *"head"* is tightly connected to the constitution of *"PEOPLE"* due to the fact that heads and brains are prototypical parts of a human beings.

(7)   There are a lot of *good heads* on the market nowadays.

Examples (6) and (7) express two general types of correspondences among metonymies, namely whole–part as in (6) and part–whole as in (7). The part for the whole is much more common in the data. There are only two instances of the whole–part direction, and they may be debatable instances of metonymy. They are *"Poor Nottingham"* where the whole of Nottingham stands for the sports

team, and *"I was getting a sore throat,"* where the whole of the throat stands for the illness.

The focalized concept that the lexical item names may be from a first-, second-, or third-order ontology. First-order entities are particularly suitable and efficient as metonymies because their use potential is characterized by a rich conceptual representation with many predictable concepts within different domains and different episodic frames. Second- and third-order entities are abstract and typically sparsely conceptually furnished with general predictable links, which make them less suitable for metonymies.

(8) This wine has a *creamy nose* and a *fruity palate*

(9) It was just a *bad ball* across the field and Coventry regained possession with Pe Paul Furlong*

(10) You then don't have a lot of food you're you're not going to be as big as big as you would have been but you'd still be bigger than someone who had *small genes* and didn't have a lot of food d'you understand*

"Creamy nose" and *"fruity palate"* in (8) suggest a specific situation of wine tasting. The expressions are conventionalized and the lexical items refer to two different body parts of the wine taster and not to the wine, but it is anchored in the wine domain with focus on the wine-tasting event and its participants. The technical connotations of the phrases suggest a frame of serious wine tasting. It is the *"STATES"* of *"SMELL"* and *"TASTE"* of the wine that are made salient. Two first-order entities, *"nose"* and *"palate"* are used for naming two second-order concepts, *"SMELL"* and *"TASTE."* In this context we know that it is not the proper body parts that are in focus, but something associated with the wine, and wine does not have a nose and a palate. Furthermore, *"bad ball"* in (9) refers to another first-order entity. We know from the functional quale of *"BALL"* that such entities can be used for playing with. This is a general characteristic of *"BALL"* that does not require a specific situation such as a football match. A *"bad ball"* calls up a *"bad pass."* In other words, a first-order entity, *"BALL,"* is used to refer to a second-order entity, *"PASS,"* and the adjective modifies a manner quale in *"PASS"* as an *"EVENT"* and not a constitutive quale of *"BALL"* as an *"ARTEFACT."* Finally, *"small genes"* in (10) is a *"NATURAL OBJECT"* in the first-order ontology, whereas the metonymy highlights the functional quale of *"GENES,"* namely that they determine the size of people. The expression *"small genes"* in this context refers to the *"STATE"* of being *"SHORT,"* not to *"genes"* as *"NATURAL OBJECTS."*

To this point, we have only been concerned with lexical items that conventionally refer to first-order entities. There are also lexical items in metonymical construals that conventionally refer to second- and third-order concepts that in certain metonymical contexts are taken to be first-order concepts:

(11) The *Caesarean section* is still on the drip.

(12) And you're also in a *good postcode* as well so*

The *"Caesarean section"* in (11) denotes an *"EVENT"* but in this context it stands for a concrete object, more precisely a patient in a medical treatment situation. *"Postcode"* in (12) is a *"SYSTEM,"* and as such it is a third-order notion. In the expression a *"good postcode,"* the system specification evokes the idea of a concrete *"LOCATION."* It is only in this metonymic sense that postcodes can be good or bad. The functional quale of *"postcode"* as specifying a location is drawn out and the adjective plays a crucial role for the interpretation of the expression (i.e., *"the postcode"* signifies a place where it is safe for families to live, prices of property are high and stable, schools are good, etc.).

Thus, metonymies may be either within or across first-, second-, and third-order entities. The relative ease of making use of metonymies is a reflex of the usefulness of the concept in question based on the number of predictable qualia roles and presupposed concepts in the linked network of concepts. Metonymy is a natural phenomenon in a cognitive model of language, whereas it poses severe problems to most formal models of meaning, because metonymical readings are considered truth-conditionally deviant. An important requirement on metonymies is that there has to be some kind of conceptual contingency in the mapping of our encyclopedic knowledge between the two concepts as well as a directionality from part to whole or from whole to part. My definition of metonymy accords with Panther and Thornburg's (2003) definition of metonymy as a contingent relation. They pointed out that a metonymical contingency relation is not based on an entailment relation (as would be the case for facets). They noted that the use of *"the piano"* for *"the piano player"* in *"The piano is in a bad mood"* presupposes that there is a piano, but it does not entail that there is a piano player. The relation between piano and piano player is contingent. Strictly speaking, were this not the case, a lot of highly general concepts, such as *"thing"* in (13) would also be metonymies, but they are not because there is no contingency restriction:

(13) he doesn't seem to care though does he which isn't such a *bad thing**

First, *"bad thing"* in (13) is similar to metonymy in that it does not refer to a thing at all. It takes a whole proposition as its referent (i.e., *"he does not seem to care"*). However, it differs from metonymy in not being predictable contentwise.[6] Any proposition can be reified by *"thing."* Second, this proposition has to be explicitly

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[6]Yet, from a configurational point of view, we know that *"thing"* can be used for other kinds of meaning configurations than propositions. *"Thing"* may refer to a *"PROCESS"* (e.g., *"The whole thing lasted for three hours,"* referring to a debate) or to an *"ARTEFACT"* (e.g., "I was furious, the bloody thing didn't start this morning," referring to my car).

expressed; otherwise *"bad thing"* would make no sense at all. It is too abstract and totally unspecified, except for being a *"THING"* (in the technical sense of the word; see Langacker, 1987). For the notion of metonymy not to be completely vacuous, a certain degree of specificity is required. An inherent feature of general lexical elements is that they may be used for a plethora of notions. In principle, generality could be seen as metonymical. This would, however, mean that there would be no end to metonymy. Linguistic elements that are general can be used to encode almost anything. What is made salient is the configuration as *"THING."* Vagueness and versatility with respect to content are trademarks of general elements. Also, there is no directionality from part to whole or from whole to part. Generality is yet another case of a construal of salience, which differs from metonymization on the previously mentioned grounds.

FACETIZATION

Again, as I have argued before, facets are meaning aspects that can be said to coexist in one and the same conceptual envelope and the same lexical item is conventionally used to name the different facets. On the one hand, the various readings can be separately focalized, but, on the other, the readings are not antagonistic. Unlike metonymization, no interconceptual mappings are employed in facetization. There are two major types of concepts that have facets. They are referred to as the *"BOOK"*-type concepts and the *"COURT"*-type concepts. The *"BOOK"*-type notions have two facets, whereas the *"COURT"*-type notions typically have four facets.

   (i)   BOOK-type concepts

(14) Well it's not that *wonderful a film* really*
(15) I load up with *fast film**
(16) He had ignored the views of his own *political party**
(17) Yes because I don't like I don't like *historical books**
(18) Douglas Hurd stressed what he called *sound money* and social responsibility*
(19) But surely it's said *British society* is changing*
(20) You know you there are only three *vegetarian dinners* here*

The *"BOOK"*-type concepts have two facets, one concrete first-order reading and one abstract third-order reading. In the preceding contexts, the lexical item maps onto either of the two facets. The *"wonderful a film"* in (14) highlights *"FILM AS KINETIC ART,"* a third-order entity, whereas *"fast film"* in (15) points up *"FILM AS*

ARTEFACT," a first-order entity. *"Political party"* in (16) highlights the members of the party, the first-order entity *"PEOPLE."* In *"historical books"* (17), *"sound money"* (18), *"British society"* (19), and *"vegetarian dinners"* (20), the *"SHELL"* concepts of *"TEXT,"* *"MONETARY SYSTEM,"* *"SOCIETAL SYSTEM,"* and *"MENU"* are called up, and the function quale is in focus in all these cases.

(ii) COURT-type concepts

(21) The *whole department* has read the National Curriculum*

(22) Presumably if we're going to distribute the students in this way according to pro rata according to the student uh distribution in the uh college we ought to be doing the same thing within the faculty should we so *a big department* has more representation than a small department*

(23) Uh a friend took me to the *local spiritualist church* as a guest*

(24) The processions move towards the first representatives of other *Christian churches* as the sounds of this much loved hymn Praise to the Holiest in the Height rise to the height of the magnificent gothic vaulting of the nave almost a hundred and two feet*

(25) What worries me about *regional theatres* at the moment is that almost none of them have permanent companies*

(26) We we We've learned that uh the banking profits of the *major clearing banks* are going to be down by about a billion pounds compared with the the the equivalent figures last year*

(27) It's funny because much to my amusement some of them send their s send their girls off to you know *local fee-paying schools* who are you know not nearly as good as we are*

"Department" in (21) refers to *"PEOPLE"* who work there. In (22), the focus is on *"department"* as an abstract administrative unit (i.e., *"SHELL"*). *"Department"* in these two capacities would not be listed as different entries in a dictionary, and we do not perceive of the two readings as different senses. We know from our knowledge of the world that the two facets are necessary components for something to be a department. The *"local spiritualist church"* (23) highlights *"BUILDING."* In *"Christian churches"* (24), *"regional theatres"* (25) and *"major clearing banks"* (26), the highlighted readings are *"INSTITUTIONS"* (i.e., *"SHELLS"*). In *"local fee-paying schools"* (27), two facets are highlighted, both *"BUILDING"* and *"STAFF/PEOPLE."* *"BUILDING"* is suggested by the context before *"local fee-paying schools"*; that is, *"send their girls off to"* and *"STAFF/PEOPLE"* by *"who are you know not nearly as good as we are."* In all cases, the purposive function of the notions is in focus, except for the *"local spiritualist church,"* which points up the *"ARTEFACT"* as an object configuration.

The *"COURT"*-type concepts are typically notions that make use of the same lexical item for first-order entities of three kinds, namely *"BUILDING,"* *"INTERIOR OUTFIT,"* and *"STAFF"* as well as the third-level entity that refers to the *"ADMINISTRATIVE UNIT"* as such. When the ontological basis for these lexical items is *"PEOPLE,"* they border on being metonymies, but they are similar to *"BOOK"* in that they are highly intrinsic for the whole conceptual envelope, and instead of being jointly activated by different lexical items, they are highlighted separately by the same lexical items.

Unlike metonymization, anaphorically referring pronouns in the context of facets are not constrained by the composite source concept. For instance, if we change *"local fee-paying schools who are not nearly as good as we are,"* evoking the idea of *"STAFF/PEOPLE"* into *"local fee-paying schools which are not nearly as good as we are,"* the interpretation is vague between *"STAFF/PEOPLE"* and *"INSTITUTION/SHELL,"* but a focus on *"STAFF/PEOPLE"* is not ruled out. This observation is consistent with our previous example with *"book"* as having nonantagonistic meaning facets. Also, unlike metonymization, the lexical item that may be used for the whole as well as for the parts is the same. There is no directionality in the correspondence between lexical items and referents as is the case in metonymization (e.g., the direction from *"I"* to *"HOME PAGE"* is from whole to part and *"red shirt"* to *"PLAYER"* from part to whole. Facetization is not a process of concept-to-concept mapping, but one of conceptual highlighting within the envelope concept only. There is thus no true directionality across facets.

CONCLUSION

This article addresses the question of what metonymy is and where it stops. It differs from other treatments of referential metonymy on two grounds. First, it proposes a more constrained lexical semantic definition of metonymy within a theory of lexical meaning as ontology and construal. The three types of readings that are referred to as metonymy in the cognitive literature are divided into metonymization, facetization, and zone activation, due to their various types of lexical–referential pairings. They are exemplified by (1), (2), and (3), here repeated as (28), (29), and (30).

(28) The *red shirts* won the match.
(29) The *court* had to assume that the statement of claim was true.
(30) I have a really *slow car*.

All three examples are construals of salience based on a schematic part–whole configuration of conceptual inclusion. In all three of them, the lexical element in question evokes a portion of meaning that is either motivated (metonymization) or

TABLE 4
The Construal of Salience From the Point of View of Lexical Encoding and
Conceptual Activation in Metonymization (28), Facetization (29), and Zone
Activation (30)

Lexical Item	Lexically Encoded Notion	Profiling	Construal
"shirt"	"SHIRT"	"PLAYER"	Sense
"court"	"ADMINISTRATIVE UNIT"/"BUILDING"/ "INTERIOR PARTS"/"STAFF"	"STAFF"	Facet
"car"	"CAR"	"CAR"/"performance"	Zone

predictable (facetization and zone activation). Table 4 shows the pairing for (28), (29), and (30).

Second, the study is methodologically different from most other studies of metonymy in being based on a corpus of spoken English that is balanced with respect to text types. A random sample of ADJ–N combinations were selected and all of them were systematically analyzed with respect to the nature of the lexical–conceptual pairing, as in Table 4.

Metonymies make use of two different concepts or senses, which, conventionally, are activated by two different lexical items. In metonymization, one of the concepts is lexically encoded and thereby foregrounded and highlighted (e.g., *"red shirts"*). *"Red shirts"* provides access to the inferred concept *"PLAYER,"* which is being profiled. It is *"PLAYER,"* not *"SHIRT,"* that is employed 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 from the left. He/She ran towards the goal"*). Out of context, *"player"* and *"shirt"* represent two different concepts or senses, but in (28) 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 involves conceptual directionality of sense mappings from part to whole or whole to part through inferencing.

Facets of senses, on the other hand, reside in the same conceptual envelope under one and the same lexical expression. Unlike metonymization, facetization is not a case of conceptual mapping but a matter of intraconceptual highlighting only. A facet of a concept is highlighted and evoked separately. In (29), the facet is *"judges, juries and magistrates who work there."* Facets reside within concepts or senses. This is shown by the fact that the readings are not antagonistic in anaphoric constructions (e.g., *"The woman was standing outside the court that was going to announce the verdict"*). Only concepts that hold both a concrete and abstract interpretation with different qualia structures have facets (e.g., *"COURT,"* *"DEPARTMENT,"* and *"BOOK"*).

Zone activation involves a conventionalized pairing of a lexical item and a certain image schematic profiling of a sense or a facet of a sense (e.g., the function

role *"PERFORMANCE"* as in *"slow car."* Like facetization, zone activation involves one concept where the various specific profiles are part and parcel of the concept in question. The specific profiles are motivated at the level of qualia structure. Facetization and zone activation construals are the reverse of metonymy in that the conventional naming is constant both for the whole and the highlighted part. The difference between facetization and zone activation is that they operate on different levels. Zone activation is motivated by qualia structure; it is omnipresent and concerns all readings, be they senses or facets.

In answer to the question posed in the title, "Where does metonymy stop?" we may say that it stops at the level of senses. Facetization stops at the level of qualia structure and zone activation concerns all readings within qualia structure. These lexical–semantic pairings at different levels are of importance in language interpretation. With their rich conceptual structure, first-order ontologies seem to play an important role in metonymization. More data are needed to obtain a more comprehensive picture of the nature of the ontologies used in metonymization and better knowledge of the actual lexical items that have facets. Also, the validity of the tripartite division into metonymization, facetization, and zone activation needs to be psycholinguistically tested across speakers to establish whether they are in fact differently understood by language users. Finally, the practical usefulness of the model for natural language processing within computational linguistics has to be tested through language interpretation and generation.

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