

Ex uno plures: A case for monosemy

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Abstract

In this article I address the issue of word meaning: Do lexical items have many meanings or do they have one basic meaning which speakers exploit in various contexts to achieve their communicative goals? While most cognitivists assume the former, there are some others who opt for basic meanings. In what follows I propose that both analyses can be used to advantage if the semantic variation that exists among linguistic items is considered. In effect, I suggest that while semantically rich words *do* exhibit polysemy, more schematic, semantically sparse items are best explained in terms of basic meanings.

Keywords: Monosemy, polysemy, lexical sign, grammatical sign, trajectory, landmark, basic meaning, message

1. Introduction

In his introduction to *Foundations of cognitive grammar* (1987: 28), Ronald Langacker introduces the notion of the **exclusionary fallacy** and discusses its role in linguistic analysis. Essentially, the exclusionary fallacy is the tendency on the part of linguists to assume that one analysis or explanation of a given linguistic phenomenon of necessity “precludes” or rules out the possibility of any other. As an example he cites the case of those who take a non-functional approach to language ruling out a functional approach on the grounds that the latter does not explain everything when, in reality, the two alternative approaches might be seen as complementary facets of a full description. The exclusionary fallacy is operative in many areas of linguistic analysis, one of which I will discuss in this article: word meaning.

A perennial issue in semantics has to do with the nature of word meaning: Are lexical items to be understood as having more than one meaning or sense – **polysemy**, or should they be understood as having one basic meaning which applies in all contexts – **monosemy**? Do speakers store the various senses of words separately in a mental dictionary or lexicon, or do they work with basic meanings, pressing them into service according to the particular message they wish to

communicate on a given occasion? Cognitive linguists in general tend towards the former, assuming that few, if any, words have one sense only. On the other hand, those who assume the latter take the view that senses posited for lexical and grammatical items can, at least theoretically, be reduced to single invariant meanings, the job of the analyst being to discover just what those meanings are. Given this tension between the two approaches, I would like to propose a middle path between the two extremes: Perhaps both analyses can be accommodated in an approach to word meaning that takes into consideration the semantic variation that exists among linguistic items as well as speaker motivation, human problem solving ability, and the communicative function of language.

Both the advocates of polysemy and of monosemy generally agree that the meaning of complex expressions (e.g., sentences) amounts to more than the sum of the grammatical and semantic components which make them up. Moreover, there is general agreement that all linguistic items ranging from lexical words through function words and inflectional morphology to syntactic structures are meaningful. These items can be said to form a cline with the most semantically rich open class forms at one end and closed class forms approaching “near semantic emptiness” (Weinreich 1963: 180) on the other. Often, the proponents of both approaches to word meaning struggle to apply their particular analyses to all items on this continuum, irrespective of the varying degrees of semantic content or schematicity these items exhibit.

In what follows, I will refer to what are usually called content words as **lexical signs** and to traditional function words as well as inflectional morphemes as **grammatical signs**.¹ I will have nothing to say about syntax. Here I note that this division does not represent a strict dichotomy since there is much overlap.

2. Polysemy

Technically considered, the term polysemy is used to designate a situation where a linguistic item, i.e., a lexical or grammatical sign,

¹ A sign is a form–meaning pair (*cf.* Saussure’s *signifiant/signifié*). It roughly corresponds to Langacker’s ‘symbolic structure’ (2013: 15) which comprises both a phonological and a semantic pole.

exhibits more than one meaning or sense. These senses are, as John Taylor observes, “felt to be related in some non-trivial way” (1995: 103), i.e., speakers can recognize a connection even though the senses are distinguished semantically and refer to different domains. A good example of a polysemous word cited by Taylor is the noun *school* which can refer to an establishment for the education of young people, the place where such education takes place, an administrative department at a university (e.g., *School of Pharmacology*), a circle of scholars who share similar ideas (e.g., *Columbia School of Linguistics*), and even a group of fish.² Another example is *chip* which can refer to, among other things, both a small disk used in poker and a fried potato slice, as well as, prototypically, to a small shred of wood, glass or stone. For communication to take place, both speakers and hearers must be aware of such distinctions, the latter choosing the correct sense when prompted by the appropriate context. These senses are not constructed on-line, i.e., speakers must have learned them previously in order for there to be stored knowledge to draw upon when required in a particular communicative situation. The hearer is, accordingly, cued as to the sense intended by the speaker both by context and, as is frequently the case, by an adjectival modifier (‘poker chip’) or a prepositional phrase (‘school of...’), at least on first mention. Both memory and problem solving ability play an important role in sorting out senses and constructing messages. This notion that items are stored in a mental lexicon does not necessarily reduce communication to a mere mechanical exercise. Rather, the mental lexicon is the result of the active learning and classifying of word senses on the part of language users while it is problem solving ability which enables them to make the proper selections and construct appropriate messages.

The polysemy of such lexical items as *school* or *chip* is normally the result of speakers originally extending a basic prototypical meaning to other, often, but not necessarily, more abstract domains. Sometimes this extension is clearly metaphorical as in the case of *foot* whose basic meaning “lower part of the leg below the ankle joint” (*OED*) has been metaphorically extended to refer to, for example, the end of a bed, a

² Note that the many types which can be cited for words like ‘thing’ (virtually any entity) and ‘bird’ (robin, owl, etc.) are not word senses; rather, they are hyponyms which share the same domain as the superordinate.

grave or to the base of a hill. Meaning extension is a diachronic process by which a new usage becomes conventionalized in a particular community and entrenched in the minds of the individual speakers who make up that community. The directions such extensions can take are not inevitable but rather, a function of individual creativity as well as of the culture and *Weltanschauung* shared by members of a speech community, which condition how they construe their world. Consequently, they cannot be predicted.

3. A polysemic analysis of *in*

In the discussion that follows, the focus will be on the preposition *in* as representative of grammatical signs³ in general.

A number of polysemic analyses by cognitive linguists (Lakoff 1987, Taylor 2003, Tyler & Evans 2006) have focused not on lexical signs such as nouns or verbs, but on grammatical signs, particularly prepositions. The aim has been to show that spatial particles such as *over* and *in*, for example, have more than one sense, these usually derived from a hypothesized proto-sense or -scene. A good example of a polysemic analysis of prepositions is that offered by Andrea Tyler and Vyvyan Evans.

In *The semantics of English prepositions*, the authors hypothesize a proto-scene for *in* which “constitutes a spatial relation in which a TR is located within a LM which has three salient structural elements – an interior, a boundary and an exterior. In addition to the spatial relation designated, the proto-scene for *in* is associated with the functional element of containment” (183).⁴ This proto-scene lies at the center of a network of distinct senses, twenty-seven in all, which derive from it. The fact that Tyler and Evans, applying what they refer to as their “principled polysemy” methodology, end up with so many senses for this preposition is ironic since one of their stated aims is to rein in the rampant

³ Grammatical signs include, among other items, prepositions and articles as well as inflectional morphemes (e.g., *-ing*, *-ed*, *-s*) and infinitival *to*.

⁴ TR stands for **trajector** and LM for **landmark**. The TR generally refers to a mobile, relatively smaller entity than the LM. The LM represents a more permanent entity, often a location, with respect to which the TR moves. The terms derive from Langacker (1987).

proliferation of senses which characterize, for example, Lakoff's "full-specification" approach (see Lakoff 1987: 420–438).

Before discussing the individual senses of *in*, Tyler and Evans cite several "non-canonical bounded LM" (184) usages in the light of the hypothesized proto-scene. Accordingly, in the utterances "The tiny oasis flourished in the desert" and "She lives in New York City", *in* is chosen since both 'desert' and 'New York City' have boundaries (somewhere) and, accordingly, function as containers, even though the LM itself (i.e., the ground, earth's surface) is physically planar. More complete containment is involved where an entity is conceptualized as 'enveloped' by something as in "The flag flapped in the wind" and "The child shivered in the cold". In all of these examples, *in* is to be understood against the background of the proto-scene.

Tyler and Evans go on to propose a number of distinct senses for *in* which ultimately derive from the proto-scene. Among them they list, to name only three, an *In Situ Sense* ("He stayed in for the evening"), a *State Sense* ("She is in prison") and an *Activity Sense* ("She's in medicine").⁵ Through a process of conventionalization and entrenchment, such distinct senses become, according to the authors, "instantiated" in the language user's semantic memory. In other words, they become, as in the case of the various distinct senses of *school*, *chip* and *foot*, stored as separate items in the mental lexicon. At this point, however, one becomes aware of a certain 'asymmetry' between the senses of these lexical signs and those posited here for *in*. It is difficult to imagine speakers choosing from the various senses of such a grammatical sign in the same way they do lexical senses. In fact, that language users are aware on any level of the distinct senses of *in*, as posited by Tyler and Evans, seems highly questionable. As a test, I would predict that while a non-linguist, in the absence of context, would probably be able to name several senses for *school*, *chip* or *foot*, s/he would be hard pressed to give more than one, if even one, sense for grammatical signs like *in*.

Recall that linguistic items can be arranged on a cline or continuum ranging from those lexical signs with the most to those grammatical signs with the least semantic content. Accordingly, lexical signs tend to

⁵ Some others are a Means Sense, a Perceptual Accessibility Sense, an In Favour Sense, and an Arrival Sense.

be more specific and informationally rich than grammatical signs whose meanings are quite underspecified and schematic. Interestingly, there appears to be a loose correlation between the frequency of occurrence and the degree of schematicity of linguistic items, and the number of senses linguists and lexicographers assign to them. Tyler and Evans posit twenty-seven senses for *in*, as we have seen, while the *OED* lists thirty-eight, and no fewer than seventy-seven senses for another high frequency semantically underspecified grammatical sign: *to* (preposition, infinitival). On the other hand, the dictionary gives only seven and eight senses for such lexical signs as *chip* and *foot*, respectively. Of course there is great variation in the number of senses lexical signs can have owing to their differing availability for metaphorical extension by a given language community. Nevertheless, a trend is observable: the more frequently occurring and schematic a sign, the more senses both linguists and lexicographers will be inclined to assign to it. This accords with Charles Ruhl's observation that "A mistaken attribution of multiplicity is likely with the most general words in the language" (1989: 9).

Given the above observations, a polysemic treatment of grammatical signs seems counter-intuitive and inappropriate as a model of how the language user's linguistic knowledge is organized and what goes on in the communicative situation. Moreover, it is uneconomical in that it entails excessive demands on speaker-hearer memory while it understates the role of human problem solving ability. An alternative analysis of the semantics of grammatical signs would appear to be in order.

4. Monosemy

According to Ruhl, "a linguistic theory must have ways of determining when multiplicity is inherent in a word and when it is supplied by other words, or even extralinguistically" (1989: 4). He recommends that initially researchers should direct their analyses toward determining a single or unitary meaning for any word under investigation. Only failing that, should they posit more than one related sense – polysemy. Finally, if the senses cannot be shown to be related, separate words should be assumed – homonymy. Ruhl accepts the possibility of polysemy in the case of the noun *orange* and homonymy in that of the noun *bank*. However, he argues that certain verbs like *bear* and *hit* are monosemic.

(Observe that that these two verbs, like grammatical signs, have quite general meanings and occur with relatively high frequency).⁶ Here Ruhl clearly wishes to avoid semantic overloading, the common tendency in semantic analysis to build too many meanings into linguistic items, meanings which can better be explained as coming from other components in an utterance. In other words, the various senses posited for lexical and grammatical signs are, he argues, often contextually induced and the result of a certain amount of “pragmatic modulation”.

Ruhl does not quite take an all or nothing stand on the nature of word meaning since he is willing (though grudgingly, I suspect) to allow polysemy in those cases where, after rigorous analysis, it is not possible to assign a single, unitary basic meaning to a word. In this respect he differs from Wallis Reid who, while allowing for monosemy and homonymy, does not admit polysemy. This stance can be said to hold true for the New York based *Columbia School of Linguistics* of which Reid is representative.

5. *A monosemic analysis of in*

Most of the work done by Reid and his colleagues has focused on the analysis of grammatical signs. Relevant to our purposes here is his 2004 article entitled “Monosemy, homonymy and polysemy”. In this article, Reid presents a detailed monosemic analysis of the three prepositions *at*, *on*, and *in* whose basic meanings divide up the semantic field of spatial LOCATION. These basic meanings together form a mutually defining system of value relations by which each is defined, at least partially, by its distinction from the other two. This interrelatedness is captured in Figure 1.

| | | | |
|-----------|-----------|---|--|
| | <i>at</i> | = | 0 DIMENSIONS |
| LOCATION: | <i>on</i> | = | MORE THAN 0 AND LESS THAN 3 DIMENSIONS |
| | <i>in</i> | = | 3 DIMENSIONS |

Figure 1. Dimensions of the prepositions *at*, *on*, and *in*

⁶ The *OED* gives 44 senses for *bear* and 22 for *hit*.

As can be seen, Reid posits one basic or core meaning for each preposition. In the case of *in*, such parsimony stands in stark contrast to the prodigality of senses hypothesized by Tyler and Evans. For Reid, as for those who take a monosemic approach in general, a **basic meaning** is the synchronically invariant underspecified semantic component of a linguistic form which remains operative in all communicative contexts.⁷ Since, owing to their indeterminateness and imprecision, there is no perfect fit between basic meanings and the **messages** they wish to communicate, speakers must press these meanings into service by selecting the one least inappropriate to the intended message.⁸ For example, in “She left her briefcase *in* the car”, the speaker chooses *in* with its meaning 3 DIMENSIONS as it is less inappropriate for highlighting the interior of the car than would be either of the other prepositions with which it shares semantic space (*on*, for example, would direct the focus to the car’s roof or hood). Accordingly, 3 DIMENSIONS is the best choice for communicating a message of containment. Here it is important to observe that the message of containment is not to be regarded as a component of a proto-sense or as a derived sense for *in*. Rather, a message of containment is inferred by the hearer from the basic meaning of *in* used in the context of a car. Reid gives the following two examples to further illustrate how the imprecision inevitable in language contributes to message construction.

1. He threw the keys *on* the grass.
2. He threw the keys *in* the grass.

In (1), the grass is clearly understood as being short whereas in (2) it is tall. What accounts for these two interpretations? Since it does not seem reasonable to posit two senses for ‘grass’ i.e., ‘short grass’ and ‘high grass’, the explanation must lie in the speaker’s choice of preposition, the only distinguishing feature in this minimal pair. Close analysis reveals that this is indeed the case and that the interpretation is being shaped by the basic meanings of the two prepositions: 3 DIMENSIONS is more

⁷ Basic meanings may be considered as so entrenched as to be essentially intuitive. They are only recoverable by analysis based on their distribution. All basic meanings are hypotheses.

⁸ Messages are not encoded in linguistic forms; rather, they are inferences made by the hearer as to the communicative intentions of the speaker.

appropriate than MORE THAN 0 AND LESS THAN 3 DIMENSIONS for suggesting a message of ‘partial immersion’ which thereby cues the hearer to interpret the grass as high. On the other hand, the basic meaning of *on*, by evoking the notion of a planar surface and, accordingly, ‘non-immersion’, prompts a ‘short grass’ interpretation. Here I note that ‘immersion’ and ‘non-immersion’ are not senses of *in* and *on* respectively. Rather, they are inferences made by the hearer, inferences which are ultimately answerable to the basic meanings which set the semantic boundaries between the two signs. In other words, the messages ‘high grass’ and ‘low grass’ are answerable via an inferential chain to the basic meanings of *in* and *on* respectively. Another point: it is precisely owing to their lack of specificity that the applicability of these prepositions is clearly not limited to the case of grass and that they are available as interpretative prompts for a variety of messages in an unlimited number of contexts.

6. *Monosemic vs polysemic analysis of in*

A monosemic analysis can be applied to the “non-canonical LM usages” (184) of *in* cited by Tyler and Evans above and repeated here: “The tiny oasis flourished in the desert” and “She lives in New York City”. Recall that their argument for the choice of *in* in these examples was that in both cases the planar areas designated are conceptualized as bounded and that boundedness is a component of the proto-scene for this preposition. As against this I would argue that in both cases what motivates language users’ choice of *in* is that they conceive of environments such as deserts and cities as 3 dimensional. In other words, speakers see environments not primarily as bounded 2 dimensional but rather as ‘containing’ 3 dimensional spaces. Moreover, of the three prepositions which carve up the semantic space LOCATION, *in*, with its meaning 3 DIMENSIONS, is the least inappropriate (*cf.* ‘*on/at* the desert/NYC’ which would either be uninterpretable or prompt the construction of a different message, depending on context). If indeed ‘boundedness’ determined choice in this case, why wouldn’t speakers normally say ‘*standing *in* the floor’ where the referent is both planar and bounded? A similar analysis can be applied to “The flag flapped in the wind” where 3 DIMENSIONS provides enough information to prompt the hearer to infer a message of envelopment, but not necessarily boundedness (whether or not the LM,

the air, is bounded is irrelevant). In all three examples, the choice of *in* is motivated by a message of at least partial containment which is a function of how the speaker conceptualizes the particular place or situation referred to while, from the hearer's perspective, it serves as a prompt for the construction of a message in line with the speaker's conceptualization.

Moving on to the senses posited by Tyler and Evans, the question is whether it is necessary to hypothesize so many, or even any, for grammatical signs in general.⁹ Perhaps a monosemic analysis can provide a more viable, more economical explanation of what language users are doing when they select such forms in the communicative situation. Beginning with the In Situ Sense as exemplified by "He stayed in for the evening", Tyler and Evans maintain that this sense "crucially" conveys the notion that the TR "*remains* in a particular location" (186), i.e., the space designated by the LM, for an extended period of time. As against this, I would argue that in the example cited, the basic meaning of *in*, 3 DIMENSIONS, prompts the hearer to construe the subject as located in an enclosure, in this case conventionally understood as the home, nothing more. The idea of remaining for an extended period of time, however, comes from the linguistic context, specifically, the verb *stayed* and the prepositional phrase *for the evening*.

As regards the second sense cited above, the State Sense, as exemplified by "She is in prison", Tyler and Evans argue that such states are conceptualized as "constraining" (188) owing to the "tight correlation between being located within a bounded LM and the state experienced". It is this fact that motivates "a distinct State Sense having become conventionally associated with *in*." (188). As against this it can be argued that while *in* is clearly appropriate when referring to a bounded LM like a prison, it is the 0 article which prompts the generic interpretation that gives the phrase its – now conventionalized – State Sense (*cf.* 'she is in *the* prison'). Moreover, the notion of 'constraint' clearly comes from 'prison'. As another example of the State Sense, Tyler and Evans cite the expression 'in trouble' where a TR is conceptualized as in a state difficult to leave, i.e., a constraining state. The question here is, does the same analysis hold for 'in luck'?

⁹ Due to limitations of space, only three of Tyler and Evans' 27 senses can be examined here.

The third sense, the Activity Sense, also involves, according to Tyler and Evans, a tight correlation, this time between an activity and a bounded LM. Accordingly, in such utterances as “She’s in medicine” (i.e., ‘works in medicine’), “the notion of an activity can come, through pragmatic strengthening, to be reanalyzed as a distinct meaning associated with *in*” (189). Moreover, once this distinct meaning has been instantiated in semantic memory, it can mean the activity associated with a variety of LMs, ‘work’ in this case or, for example, ‘study’ in “She’s in graduate school”. As against this I would argue that *in* is chosen because it is the least inappropriate of the location prepositions for directing the hearer to construe the LM, in this case metaphorically, as a container, and, accordingly, suggest a message of involvement. As far as an Activity Sense is concerned, the notion of activity does not reside in *in*, but rather, in the hearer’s encyclopaedic knowledge; people know that one ‘works’ in medicine and ‘studies’ in graduate school.

In the foregoing, I have chosen the preposition *in* as a representative grammatical sign in order to demonstrate how a monosemic analysis might be more appropriate than a polysemic analysis when applied to such signs. Because grammatical signs are highly schematic, as opposed to lexical signs which are far richer in content, positing a basic invariant meaning for such signs, a meaning which language users press into service to construct and interpret messages in varying contexts, seems to be a more economical and realistic model of speaker linguistic behaviour than does the positing of several senses. Being highly schematic, the meaning of a grammatical sign, in its capacity as a speaker-intended prompt, can only provide a hint as to the overall message which the hearer ultimately constructs in the light of the immediate context as well as his/her life experience and encyclopaedic knowledge. In the case of lexical items, on the other hand, once prompted by a speaker’s choice of a particular word, e.g., *school*, in a specific context, the hearer is able to determine the sense meant and to construct a message in which the informational contribution of the word itself is considerably richer than in the case of grammatical signs. Accordingly, there is a greater fit between lexical senses stored in the mental lexicon and messages than there is between grammatical meanings and messages owing to the former’s greater specification. On the other hand, in the case of the latter where problem solving ability comes to the fore, the hearer must make

inferences as to the message based on limited, non-specific semantic input.

7. Conclusion

To conclude, I believe it is possible to avoid the exclusionary fallacy in the case of word meaning analysis if one considers speaker motivation, the types of linguistic items involved, and the roles played by memory and human problem solving ability. As I hope to have demonstrated above, a polysemic analysis works best for those open-class, semantically rich items on the lexical end of the continuum while a monosemic approach is more suitable for those more schematic, semantically impoverished items on the grammatical end. Of course, as we move from one end of the continuum to the other, categories often overlap and there will be great variation in word and particle semantics to the point where a traditionally lexical word like *go* or *hit* might prove more susceptible to a monosemic than to a polysemic analysis while that old chestnut *over* might ultimately be convincingly shown to exhibit limited polysemy.

A final observation: the degree to which messages might become conventionalized and understood directly, i.e., no longer inferred from the individual semantic components present in an utterance, is often a highly individual matter that cannot be predicted by either model. As Robert Kirsner (2002: 352), observes, “We do not know which units the speaker himself or herself is operating with: whether he or she works at the level of the meaning, or the level of the message, at some intermediate level, or at all possible levels at different times.” This observation is a sobering reminder of the limitations inherent in word meaning analysis.

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