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Polysemy as Complexity?

Abstract

The author presents an opening to the discussion of the possible alternative relationships between polysemy and complexity. It will turn out that increasing polysemy can, for instance, be seen either as increasing complexity or decreasing complexity, depending on the perspective.[1]

1. Introduction

Studies of linguistic complexity have thus far mainly concentrated on such realms as grammar, morphology, and phonology. Even if researchers often acknowledge (e.g., Miestamo, in press) the difficulty of determining the scale of such complexity—e.g., which of two options in expressing a functional category is actually more complex—a starting assumption or a working hypothesis would be one where the number of morphemes, the number of different grammatical categories, and the degree of irregularity are accepted as factors pertaining to complexity. In the following, as the phenomenon under study is a semantic one, several stands on complexity are adopted and let to compete.

Polysemy is a non-straightforward case, despite its name: a hasty assumption would be that as there are "many senses" (*polus* + *sēmeion* / πολυσημεία), increasing polysemy should involve increasing complexity. This is only one part of the story. The problem has to do with the many perspectives on polysemy: we can look at it from the point of view of the word (that is polysemous), of the many meanings (that are assigned to a word), of meaning in general (incorporating that meaning needs to be

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expressed), or from the viewpoint of the lexicon (relating, e.g., to the number of words in a lexicon).

2. Six perspectives

(1) In the most simple (and naïve) (semasiological) case, we start from a lexeme and see how it is used semantically. In the least complex extreme, one word would have one meaning: once we had learned about one instance of the correct use of a word, we would then know the fixed semantic value of a word irrespective of the instance and context it is used in. If a word acquired more meanings, complexity would increase.

(2) In a mirror-image way of looking at the pairing of words and meanings, we could (onomasiologically) start from *one* meaning that a word can have. Whether this meaning should be expressed with the same word as, or a different word than a word that is used to express another meaning, would be irrelevant for complexity. In turn, complexity would arise if that one meaning could be expressed by two alternative means: in this (still naïve) view *synonymy* would be complex, but polysemy would not be more complex than monosemy.

(3) Semantics should, then, be looked upon as a more dynamic system, where the interrelatedness of such meanings that were discussed in (2) would be taken into account when determining complexity. Namely, if a set (or network) of semantic values that have much in common were expressed via one word, learning and handling this system would require less effort than if semantically distant values would be associated with one and the same word. Thus *homonymy* would definitely be more complex than polysemy. In the same vein, "natural" and "predictable" polysemy—recurrence of certain types of semantic links throughout the lexical-semantic system—would be less complex than highly conventionalized and idiosyncratic traits of polysemy.

(4) Semantic complexity could also refer to the very complexity of a semantic value. Such thinking can be seen in the theory of semantic universals and primitives. A semantic primitive à la Wierzbicka (e.g., 1996) would be maximally simplex. The more features a description would require, the more complex such meaning would be. This distinction bears no direct link to polysemy, as semantic values can be either complex or simple in the case of both monosemy and polysemy. However, one place of finding less complexity would be the "abstract core meanings" of highly

polysemous words, the shared components. The more general a shared meaning should be, the less features it could have; the more primitive it should be.

(5) Relating from the previous, we could think that "semantically rich meanings" would be very specific, very context-dependent,[2] and very specialized. In contrast, vague, loose, and general meanings would be "semantically poor". At worst, this notion could be reduced to the number of *referents*: as there would be more referents of *dog* around than referents of *spaniel*, the meaning of *dog* would be poorer—and less complex—than the meaning of *spaniel*. Again, a very polysemous word, taking into account all the instances it could refer to (such as *get*), could be seen as semantically poorer and less complex than a nearly monosemous word. Here we would arrive at an opposite conclusion from (1) as to whether polysemy is complex or not.

(6) Finally, from the point of view of the lexicon, we could have an over-simplistic starting point that "we need to express 1,000,000 meanings" through words (here artificially excluding combinations of words). If we could accomplish this goal with 10,000 polysemous words each of which had 100 meanings, the lexicon would be smaller, i.e., less complex, than if we had 500,000 or 1,000,000 words to meet the same needs. Again, polysemy would involve less complexity than no polysemy.

3. Conclusion

As we can see in the thought play in (1) through (6), there is not just one way of deciding how polysemy relates to complexity. What is more important, several points have violently taken polysemy as a quantifiable phenomenon. For example (1) and (6) take for granted that we can start by counting the number of senses in a case of polysemy. Point (3) is more careful in assessing the semantic relatedness between senses. In fact, the better we realize that polysemy usually involves chains of gradually changing meanings, the less we can assume easy segmentation and quantification.

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[2] Here *context-dependent* means that the applicability and availability of a meaning is highly dependent on the context. Thus, in the same vein, a vague meaning would as such be context-independent, and in order for it to have a more specific (and richer) meaning in our interpretation, it would need context.—I thank the anonymous referee for the request to clarify this conceptually.

Whether polysemy represents increasing or decreasing complexity is not irrelevant for many studies of grammatical complexity. For example, one of McWhorter's (2002) examples of English (grammar) becoming less complex is the disappearance of the distinction between 'to here' and 'in here' (as in Swedish *hit* vs. *här*). However, at the same time the remaining English item *here* has gained semantic complexity in acquiring both of the meanings.[3]

One oversimplification could be that a system that is "working well and smoothly" is not complex. In this vein, if language involved too few lexemes with too big a polysemy load, that would be unfunctional and complex for the user. If language involved too many lexemes with only one meaning for each, that would be complex too. Thus (cf. Ferrer i Cancho 2005) an intermediate system (the one probably all languages have) is the best functioning and the least complex one: it allows flexibility for use, but offers multiple means for expression.

All of the points (1) to (6) above may capture some facet of truth that is relevant in appreciating the links of polysemy to complexity. I am happy to leave the final answer open.

References

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[3] Alternatively, one could view that the meaning is left unexpressed in the word *here*. According to Dahl's (2004) idea of semantic niches, this loss of distinction is simplification. Thus, whether we are dealing with increasing or decreasing complexity depends on our viewpoint similarly as in point (5) above. Again, I thank the anonymous referee for this remark.

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