

TITLE	Polysemy versus homonymy
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Summary

Polysemy and homonymy are traditionally described in the context of paradigmatic lexical relations, specifically where isomorphism, understood as the ‘biunique association of form and meaning’ (McMahon, 1994: 86), is violated, i.e. where the correspondence between the two sides of the linguistic sign is not one-to-one. Unlike monosemy, in which one meaning is associated with one form, and unlike synonymy, in which one meaning is associated with several forms, in polysemy and homonymy several meanings are associated with one form¹. Like other paradigmatic relations, polysemy and homonymy belong in morphology as well as in lexical semantics, i.e. can be described between morphemes and between words, simple or complex².

The classical view of polysemy and homonymy as a binary opposition does not prevail today as it did in the past. The most extreme revisions have questioned the descriptive synchronic difference between polysemy and homonymy (e.g. in Southworth, 1967: 357, cf. also Bergenholtz & Agerbo, 2014), or have subsumed the separation as under a general use of one term (*homophony*) and then established distinctions within according to meaning and distribution (Nida, 1975: 97-99), as recalled in Terrence (2006: 2216). A more widespread reinterpretation of the classical opposition is in terms of a gradient where polysemy and homonymy arrange themselves along a continuum where

formally identical units can be represented at different points, according to their degree of semantic proximity and degree of entrenchment (the latter, understood as the degree to which a form recalls a semantic content and is activated in a speaker's mind; in this regard, cf. section 3 on experimental models): From most and clearest proximity as well as highest degree of entrenchment in polysemy to least and most obscure proximity and lowest degree of entrenchment in homonymy.³

Keywords

gradient, lexical meaning, pragmatic meaning, historical relatedness, semantic relatedness, sense

1. Introduction

Polysemy has been studied with regard to morphology, especially to affixation, in a range of languages, e.g.:

English ⁴	deverbal noun-forming suffix <i>-er</i> :	<i>painter</i>	AGENT
		<i>cooker</i>	INSTRUMENT
Mandarin	<i>-bā</i>	<i>yóuxìbā</i> (game- <i>bā</i>)	
		‘amusement arcade’	
		<i>yǎnbā</i> (eye- <i>bā</i>)	
		‘optometry clinic’	
Spanish	deverbal noun-forming suffix <i>-or</i> :	<i>revisor</i>	AGENT
		‘proofreader; conductor’	
		<i>calefactor</i>	INSTRUMENT
		‘heater’	

Of these, the English suffix *-er* is a paradigmatic example of the relevance of polysemy and homonymy in morphology and of the difficulties inherent in their identification with respect to each other. The subject of a number of analyses⁵, *-er* expresses a range of semantic categories, where two of the most outstanding ones, AGENT and INSTRUMENT, can be intuitively related as [+ANIMATE] and [-ANIMATE] realizations of the doer of the action conveyed by the base verb. However, and despite their apparent semantic proximity, these and other interpretations of *-er* (e.g. LOCATIVE, as in *Londoner*) have been described instead in a number of languages as related to processes that are more in line with what lies behind homonymy (e.g. ellipsis, borrowing) than with what is identified as polysemy⁶.

More evidently than in *-er* affixation, homonymy has been described, e.g. in:

English	inflectional suffix <i>-s</i> in nouns:	<i>dogs</i>	
	inflectional suffix <i>-s</i> in verbs:	<i>tells</i> ⁷	
Spanish	deverbal verb-forming prefix <i>in-</i> :	<i>incomunicar</i>	NEGATION
			‘incommunicate’
	deverbal verb-forming prefix <i>in-</i> :	<i>infiltrar</i>	DIRECTION
			‘infiltrate’

These examples raise two theoretical questions as regards the terms related by homonymy. The first is that homonymy has also been described between words and word-forms or inflected words:

English	<i>rose</i> ^N	vs.	<i>rose</i> ^V
	‘The flower or plant’		‘To get up from sitting or lying’ (Past tense)
Spanish	<i>vino</i> ^N	vs.	<i>vino</i> ^V
	‘wine’		‘To come’ (Past tense)

Extension of homonymy to word-forms as in the above pairs is avoided if descriptive accuracy is desired. This is on the grounds that, in such examples, the relationship is not between the same dimension of the word (i.e. it is between lexical word versus grammatical word) and also on the grounds that this type of examples imply different word-classes.

The true grammatical counterpart for *rose*^N above as far as these relationships are concerned, i.e. *rose*^V ‘To colour like a rose; to make rosy’ or ‘to become rosy; to blush’, raises the second question of the terms related by homonymy, namely whether polysemy and homonymy should be restricted to members of the same word-class or not, i.e. whether the grammatical and semantic contrast between formally identical and often morphologically related pairs that belong to different word-classes is still within the scope of polysemy or of homonymy. In other words, whether polysemy and homonymy demand grammatical identity. This question arises from two types of examples:

- i) Occasional, undisputed instances of homonymy where formal identity complies with the conditions for homonymy presented in section 2, e.g.:

English	<i>egg</i> ^N	vs.	<i>egg</i> ^V
	‘The [...] spheroidal body produced by the female of birds and other animal species [...]’		‘To incite, encourage, urge on; to provoke, tempt’
Spanish	<i>velar</i> ^{Adj}	vs.	<i>velar</i> ^V
	‘velar’		‘To stay awake’

- ii) A more systematic profile that involves formal identity and semantic contrast such that the meanings or senses are systematically related and the terms are morphologically related too, as in conversion-related pairs, e.g.:

English	<i>telephone</i> ^N	vs.	<i>telephone</i> ^V
	‘Any of various types of acoustic apparatus, device, or instrument for conveying sound [...]’		‘Senses relating to telephones and telephone calls’
Spanish	<i>decir</i> ^N	vs.	<i>decir</i> ^V
	‘saying’		‘To say’

The latter type has been described as homonymy in a number of references, sometimes leading to contrasts like grammatical homophony or grammatical homonymy as opposed to plain homophony or homonymy⁸. Again, homonymy across word-classes does not fit completely the framework of paradigmatic relations where polysemy and homonymy belong, because the formally identical items will not belong in the same paradigm. Like with polysemy and homonymy in general, decisions in this field depend largely on how much semantic change is considered to exist in this type of pairs⁹, specifically, on whether categorial meaning¹⁰ is considered to be part of the identity of a lexeme: if it is, two or more word-classes imply two or more lexemes, and an argument for a relationship between lexemes can be raised (i.e. homonymy). If it is not, and is instead considered a surface feature that instantiates various cognitive categories that refer back to one lexeme (e.g., as according to Whorf, 1945; cf. also Nida, 1975: 99), an argument between variations of the same meaning can be raised (i.e. polysemy, even if still termed *homophony* in certain frameworks, e.g. Nida’s, 1975).

Either way, the description of these pairs as one or the other seems to contravene more conditions of each of the relationships than the ones it complies with. Description in terms of homonymy has led to contradictions in terms, like ‘etymologically related’ homonyms (Koskela & Murphy, 2006: 743), homonyms ‘in spite [of the existence of] a common meaning’ (Lipka, 1990: 140), or even if ‘[...] this entails that some of the

homonymous meanings are semantically closer connected than others' (Bergenholtz & Agerbo, 2014: 32). The descriptions in terms of polysemy are fewer and usually use some qualification of the term¹¹. This is a difficult area where lexicology and morphology converge and, thus, one where such pairs as the above are identified to belong, even if it is not entirely specified exactly where or how (cf. in this regard Bauer, Lieber & Plag, 2013: 545-549).

2. Polysemy versus homonymy

2.1. Critical analysis of scholarship

Polysemy and homonymy are intended to supply a systematic explanation for language evidence that runs against the isomorphism desirable or expected from a language system (cf. Venneman, 1978, cited in McMahon, 1994: 90-91 cf. also Geeraerts, 2010: 61-63)¹². In that sense, polysemy and homonymy refer to general properties of language, even if each addresses different inherent properties of the linguistic sign: as McMahon (1994: 177) points out, as the form and the meaning of a lexeme are independent, '[...] either may therefore change with time'. It is precisely on which the changes have taken place where the contrast lies, even if the theoretical contrast has not always contributed to workable separations¹³.

This difference in nature is difficult to materialize in practice: Polysemy assumes one unit that conveys several meanings (often referred to as *senses* rather than *meanings*¹⁴), whereas homonymy assumes as many units as meanings (rather than *senses*), even if the separate units in question share one form. The criteria traditionally put forward for the separation appeal to relatedness in polysemy versus distinctiveness in homonymy¹⁵. Relatedness (ultimately implying one unit) and distinctiveness (ultimately implying several units) have been attested traditionally according to what Leech (1974:

228-229) summarized as ‘historical relatedness’ and as ‘psychological relatedness’, even if, as advanced by this and other authors themselves, the two may not agree. Some of the contents presented here are evidence of historically unrelated lexemes that may be considered to be psychologically related, or where a metaphorical transfer of meaning may be considered to exist, even if there is actually none (cf. also Palmer, 1981: 100-102). Arguments have been raised, e.g. in favour of etymology as definitive evidence with respect to speakers’ judgments (cf., e.g. Joseph, 1992 or Tournier, 2007: 413), but also against (Lipka, 1990: 136-137), ultimately leading to rejection of etymological evidence as a ‘useful criterion for distinguishing between homonymy and polysemy’ (Lipka, 1990: 186).

According to historical relatedness, one unit is described if the senses associated with a form can be referred back to one etymon (i.e. there is one polysemous unit, and which sense is intended is disambiguated by context¹⁶). By contrast, two or more units are described if the meanings can be referred back to two or more etymons (i.e. there are two or more homonymous units)¹⁷. The latter criterion appeals to historical evidence, and thus to evidence that may have been distorted over time to the extent that it may no longer represent present-day status.

Similarly, and according to psychological relatedness, one unit is described, if the senses associated with a form are variations of one and the same general meaning, typically as figurative or metaphorical extensions (hence, one polysemous unit), and two or more units are described, if the meanings are unrelated to the *extent* that they are not considered to be variations of one general denotation (hence, several homonymous units)¹⁸.

These criteria guide lexicographical practice such that homonymous forms are recorded as separate entries whereas polysemous forms are recorded as one entry with

various types of subheadings. The application of this principle and its consequences are less conspicuous in electronic dictionaries, but they still show the considerable arbitrariness and variation noticed in printed dictionaries (cf. Palmer, 1981: 101; cf. also Robins, 1987: 73; cf. specially Béjoint, 2010: 293-206, 303-308 on the formalization of lexical information in dictionaries, printed or electronic). Maximized polysemy is common practice, among others, because sense separation is hard to objectivize, even between senses that are clearly related (cf. Palmer, 1981: 100; cf. also Lyons, 1977: 554, cited in Lipka, 190: 136, and Lipka, 1990: 139). Thus, e.g. *The Oxford English Dictionary* and the *Merriam-Webster Dictionary* list all the possible meanings of *be* under subheadings within one entry, instead of as separate entries according to meaning, even if meaning relatedness between *be* as a copulative verb ('to have or take place in the world of fact, to exist, occur, happen') and *be* as, say, an auxiliary verb for passive voice ('In transitive verbs, forming the passive voice') is questionable¹⁹.

Other tests have been put forward, but again with limitations. Palmer (1981: 105-107) cites the use of paradigmatic relations for disambiguation (such that homonyms will resort to different sets of synonyms or antonyms). Both Palmer (1981: 105-107) and Robins (1987: 66-69) refer to tests of ambiguity (semantically ambiguous sentences in principle refer back to homonymy, whereas semantically unambiguous sentences refer to polysemy), which can be implemented by a number of operations, e.g. by coordination (the interpretation of a lexeme with respect to two coordinates should be the same) by replacement with pro-forms of the type 'do so' (the replacement of a predicate including a lexeme with 'do so' should not involve a different interpretation than when it is not replaced), by ellipsis and by zeugmatic constructions²⁰. Collocational combinations and collocational constraints have also been cited as potential criteria (e.g. in Lipka, 1971: 214 and Robins, 1987: 69).

Of the tests cited in the literature, one stands out for its relevance in morphology: Lyons (1977: 565-566) appeals to what Robins (1987: 69) describes as the ‘paradigmatic associations of morphologically related words and their semantic relations with the word in question’, and that could be encapsulated under the concept of the derivational paradigm of a lexeme. Similarly, Bergenholtz & Agerbo (2014: 29) refer to inflectional paradigms, such that different inflectional paradigms signal homonymy, whereas the same inflectional paradigm signals polysemy. While in principle it could be assumed that related units will be in the same derivational paradigm, this is not without problems, and Lyons himself shows that the correspondences are not entirely systematic in English (e.g. as in the correspondence between the senses of the verb *to act* and its agentive derivatives *actor* and *agent*; cf. also Spencer, 2015: 303 for similar examples or Bauer, Lieber & Plag, 2013: 132 for senses of, e.g. *mouse*). In Spanish, this keeps polysemous words together in some cases, e.g. as in *plumífero* (from *pluma* ‘quill’ and ‘pen’ above), which lists together ‘carrying feathers’ along with ‘person who is a writer by trade’, but which is not continued in other derivatives (e.g. *emplumar* o *plumaje*) where it could have retained, along with the sense for ‘quill’ (‘cover with feathers’, ‘a bird’s feathers’) the senses for ‘pen’ (as ‘write with a pen’ and as ‘piece of writing’ or ‘equipment for writing’).

2.2. Semantic relatedness

The changes in meaning and the processes of meaning extension have attracted more attention in language description than the changes in the form. This is largely because they are a defining language feature (cf. Akmajian et al., 1995: 42-44) and a process of representation of which similar patterns can be attested cross-linguistically (cf. Lyons, Demers, Farmer & Harnish 77: 136, cited in Lipka, 1990: 136, Booij, 2005: 221-223,

Béjoint, 2010: 286, Rainer, 2014: 349). This is so much so, that meaning extension has been considered one of the features that separate human language from animal language (Tournier, 2007: 199).

In a recent publication, Kawaletz & Plag (2015: 290) list several unanswered questions on polysemy in word-formation: ‘How can we account for existing meaning extensions or those encountered in new formations? What is the role of encyclopaedic knowledge in the semantic interpretation of complex words? And how do the semantics of base and derivative interact in order to produce the reading of a given derivative?’ Of these, the attention in this section focuses on morphological research where semantic change of the type discussed above plays a role²¹.

The main of these questions is the very identification of the semantic patterns and their limits, specifically for a clearer identification of degrees of sense relatedness (Plag, 1999: 124). This is a major methodological difficulty, one that is recurrently noted in the literature²², and one that remains a major obstacle in the separation between polysemy and homonymy²³. Examples of the difficulty in handling these degrees systematically abound. It was illustrated above with the various interpretations of English *-er* and of Spanish *-or* in section 1, as well as in other affixes that have been described both as polysemy or homonymy elsewhere, like English denominal verb-forming affix *-ize* as polysemy in Plag (1999: 122-145), but partly polysemy and partly homophony in Lieber (1996). At a lexical level, this can be illustrated with the various senses of *eat* (i.e. where it may mean ‘take food’, ‘use up’ and ‘corrode’, but also with respect to various types of food, e.g. where the food in question may equate eat to drink, Palmer, 1981: 101-102). At the lexical and the morphological level, the formalization of the various levels of signification at play (morphological, lexical, contextual, encyclopaedic) as an objective scale of intermediate cases between polysemy and homonym is still limited. Deane’s

(1988: 345) description of three types of polysemy (allosemy, regular or morphological, and lexical) as a gradient between total semantic identity and total semantic distinctness has not resulted in a widespread framework for the separation of polysemy versus homonymy. Otherwise, the very allowance of degrees does not contribute significantly unless it is workable and objective. Thus, for example, Farrell's (2001: 127, emphasis as in the original) description of the senses of English *bad* such that it is '[...] not polysemy (because it is sufficiently distinct from the central sense), but it is not a separate word: It is a 'quasi-homonym, which is unlike a prototypical homonym only in that there is clearly *some* implicit semantic connection with an existing word' is true to fact but does not lead to a fully operational scheme. This is partly a methodological question but partly also because semantic relatedness can be obscured by usage, so it is difficult to objectivize senses or of meanings that are related or unrelated, but which are not always perceived to be so²⁴.

The objective criteria for sense separation available in the literature (e.g. independent truth conditions, identity of sense evidenced under anaphora and coordination, and the existence of a general core of meaning) are not without problems (for a review, cf. Kearns, 2006: 569-572). One of the most frequently cited criteria, the identification of a core of meaning, is particularly thorny in complex words. Not only because it is a difficult topic in words in general, but also because, in complex words, the analysis must consider not only the semantic load contributed by the base, or by the affix, but also by the interaction of the two, base and affix (cf. Beard, 1990, Lehrer, 2003, Plag, 1998, 2003, Lieber, 2004, Plank, 2010 Rainer, 2014 or Kawaletz & Plag, 2015)²⁵ and even by co-occurring affixes (Fábregas, 2015).

The separation between polysemy and homonymy underlies a range of research areas in morphology, syntax and lexical semantics. This is because it appeals to the

identity of the linguistic sign and this identity permeates all levels of description. This can be seen in a number of open questions that go beyond the identification of polysemy or homonymy in specific affixes, as above. Leaving aside points of special relevance of polysemy, like its explanatory value in the assessment of the potential productivity of words (Plag, 1999: 141), or of the various senses of modal verbs (e.g. epistemic versus deontic, cf. Depraetere & Reed, 2006: 282-283), its separation with respect to homonymy can be found in several others, two of which, alternation and grammaticalization, are briefly reviewed below. These have been selected for this review insofar as semantic changes that do not operate the usual metonymic or metaphoric patterns discussed in polysemy, but are still related to semantic change and to the separation between polysemy and homonymy.

Polysemy of a systematic kind has been cited in alternations of the type transitive / intransitive (cf. Kearns, 2006: 572-573) or stative / dynamic in verbs (cf. Mair & Leech, 2006: 339). This is on the grounds that, given the necessary and the sufficient conditions, verbs may build extended meanings from basic meanings, and will behave differently in each (Levin & Rappaport Hovav, 1992 132, 137-138), even if the verb senses share certain semantic components (Levin & Rappaport Hovav, 1992 146). By contrast, the alternation count / mass in nouns has been reviewed as homonymy (cf. Mufwene, 1984: 202-203), even if granting that the possible interpretations of each case do not mean a different lexical meaning (Mufwene, 1984: 215). The fact that plural marking has different semantic effects according to whether it refers to count or mass (Plank, 1994: 1675) may however be taken as evidence of a more substantial separation, even if the senses as count or mass still show a significant degree of relatedness. A related case of homonym plurals has been made for certain examples in Spanish (e.g. *celo* 'zeal' versus

celos ‘jealousy’), even if these do not always refer back to the distinction count / mass (cf. Ambadiang, 1999: 4887-4888).

Polysemy has also been associated with grammaticalization (e.g. in Bybee, Perkins & Pagliuca, 1994: 17-18, cited in Ladányi, 2015: 663; cf. also Aitchinson & Lewis, 2003: 254, Wu, 2003, Murphy, 2010: 97-98, Arcodia, 2014, Rainer, 2014: 349), even if the semantic change in question is of a very specific type and diverges substantially from the range of metaphorical and metonymic patterns associated with polysemy otherwise. More important, at the end of the process, i.e. in fully grammaticalized words, the profile is closer to homonymy than to polysemy (Murphy, 2010: 98). This can be illustrated with the deadjectival adverb-forming Spanish suffix *-mente*, as in *rápidamente* ‘quickly’, originally the noun *mente* ‘mind’ but grammaticalized to the extent that it is no longer felt to be the same as the original noun for their separate meanings, and despite their common etymon (for a comprehensive review, cf. Hummel, 2012). Grammaticalization is evidence of how polysemy may cross over the limit between lexical and grammatical meaning, but also of how, as semantic relatedness becomes obscure, gradually diverging senses are represented by the form where they were originally clearly related, to the extent that the original relatedness is replaced by unrelatedness and, therefore, according to the semantic criterion, polysemy is replaced by homonymy (cf. Kearns, 2006: 569), even if the changes have not taken place in the form.

2.3. Formal identity

Unlike polysemy, where the many-to-one correspondence arises from semantic changes, homonymy may result either from changes in the form or changes in the meaning.

Homonymy is central to several issues in morphology. It defines a source of blocking, whereby formal constraints preclude coinage of specific derivatives if an identical form pre-exists, even if the meaning of each, the pre-existing form and the potential coinage, are unrelated²⁶. The influence of homonymy blocking and its role in the success of rival formations is still to be assessed specifically²⁷.

The changes in the form, phonological, of spelling or both, may refer to changes in specific sets of words like adjectives and adverbs in *a-* arising from Old English prepositional phrases (cf., among others, Jespersen, 1909-49, vol. II: 332-333, Marchand, 1969: 139-140), or, more relevantly, to large-scale developments that have altered the structure of languages significantly. Examples of the latter are the formal changes that resulted, e.g. in the formal identity of the past tense forms and their formally identical participial forms in English (cf. Kastovsky, 1980: 238-241). A more extensive example can be found in the phonological changes started as early as the Old English period and that induced a levelling of inflections that resulted in the neutralization of many of the formal marks of inflection and of word-classes in English²⁸. The ultimate cause of the changes responsible for such a result are debatable, and various arguments have been raised in this respect, like essentially phonetic changes (Moore, 1927: 254-256), or the loss of relevance of certain endings as morphological marks (Minkova, 1991: 127), both for English²⁹.

The changes in the meaning consist in semantic separation to the extent that originally related senses are no longer perceived to be so, i.e. original relatedness (polysemy) becomes unrelatedness (homonymy) (cf. Murphy, 2010: 94-95). This section gives two examples where polysemy and homonymy converge, either because it can be argued that a semantic drift has taken place, or because formal and /or semantic changes have resulted in formal identity with separate meanings. The two cases concern

participles. This is a particularly relevant case: although polysemy and homonymy are assumed to occur more in derivational than in inflectional morphology (Carstairs-McCarthy, 2005: 18-21, cited in Dressler, 2015: 503), as noted by Štekauer (2015: 221), polysemy and homonymy cross over the opposition between inflection and derivation, and participial forms are one such example.

The English ending *-ed* is interpreted as a participial suffix of verbs and also as a derivational suffix for formation of deverbal adjectives, e.g. English *-ed* in *abandoned*^V (the past participle of the verb *to abandon*) versus *abandoned*^{Adj} ('devoted or given up to an influence, passion, pursuit, etc.; forsaken, deserted')³⁰, Spanish *-ido* in *comido*^V (the past participle of the verb *comer* 'to eat') versus *decidido*^{Adj} 'determined'. This type of examples has been interpreted as a case of two separate coexisting affixes (and hence, in theory, homonymy, e.g. in Adams, 1973: 22-23). In a rare case of objectivization of gradual contrasts, Granger (1983) arranged *-ed* forms and the structures where they occur as a scale between purely participial instances (i.e. in full passive structures) and purely adjectival instances (i.e. in copulative structures), with specification of the intermediate structures and the criteria for identification. In the case of Spanish, Rainer (1999: 4608-4609) explains the semantic contrast between the participle *decidido* 'decided' and the adjective *decidido* 'determined' in terms of semantic change, so the implicit interpretation here is one of polysemy³¹.

The English ending *-ing* today brings together under one form the contemporary counterparts to Old English participial suffix of verbs and the Old English derivational suffix for formation of deverbal nouns *-ung* after formal changes and neutralization as one form³². The homonymy of the originally inflectional and derivational affixes here coexists with the interpretation of several polysemous derivational cases of *-ing*,

according to whether it forms deverbal adjectives or deverbal nouns (cf. O'Grady & De Guzman, 1996: 171).

These are not the only possible interpretations of units that are borderline with respect to inflection or derivation. Participial forms have been described in Haspelmath (1996) as word-class changing inflection, which entails the interpretation that one form may serve two functions at the same time. A similar case has been made of the German infinitival ending *-(e)n*, such that it can be both inflectional and derivational in that they may derive, e.g. nouns (cf. Fleischer 1982: 314). In the context of the separation between polysemy and homonymy, what these interpretations seem to appeal to is in actual fact to a dual nature, and hence intermediate between two formally identical forms, one inflectional and another derivational. This debate is, however, far from settled.

3. Projections

The difficulty inherent in the separation between polysemy and homonymy, or in the description of polysemy alone, is the difficulty in the formalization of language meaning (cf. Béjoint, 2010: 287; cf. also Levin, 1993: 139 for related cases). It is partly for this reason that the contrast between polysemy and homonymy has been explicitly left unresolved in the literature³³.

It is now three decades since Deane's (1988: 358) argument that polysemy is 'intractable' from a purely linguistic account and since his proposal to shift to a cognitive focus. Confronting views of polysemy in contemporary linguistics go as far back as the confrontation between linear and radial models of polysemy in lexical semantics, like Bloomfield's (1935) principle that each unit has a central denotation (i.e. *meaning*) that can be extended as specific departing denotations (i.e. *senses*) by cognitive strategies according to expressive needs, or Lakoff's (1987)³⁴ concepts that allow senses to radiate

from the concepts, so the senses are listed as separate facets of the same concept, whether they can be generated by regular patterns or not. Polysemy in morphology has been studied since then, among many others, both as a replication of the semantic properties of simple words in complex words, even if in complex words both the base and the affix contribute their own semantic load, so the resulting meaning is the result of what both apply (cf. Plag, 1999, Lehrer, 2003, Lieber, 1996, 2004) and as the opposite (cf. Beard 1990), the latter largely as a result of a different interpretation of the nature of affixes as signs, in construction grammar (for a review, cf. Arcodia, 2014), in the framework of qualia-based models and by compositional analysis (cf. Hodges, 2012 and Pustejovsky, 1996, 2003, 2006, 2012).

Contrary to Robins (1987: 73), for whom the separation is not a matter of much interest in synchronic theoretical linguistics, evidence contributed by experimental models (Beretta, Fiorentino & Poeppel, 2005 and Pytkänen, Llinás & Murphy, 2006, both cited in Plank, 2010: 93) has proved the operation of different entries for homonymy and one for polysemy, but also features of separate entries in what supposedly are instances of polysemy, i.e. striking similarities in homonymy and polysemy.

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¹ Cf., for example, Leech (1974: 97, 228-230), Lyons (1981a: 146, 1981b: 49, 51), Palmer (1981: 101), Cruse (1986), Lipka (1986: 128; 1990: 134-139), Robins (1987: 53, 56), Goddard (1994: 22), Koskela & Murphy (2006: 742). See also Falkum & Vicente (2015) for a review of the contrast between polysemy and homonymy in linguistics in general.

² For an overview of paradigmatic relations and morphology, cf. Lehrer (2000: 144).

³ Cf. Heger (1974: 171). Cf. also Cowie (1982: 51, cited in Lipka, 1990: 139) and Lipka (1986: 138; 1990: 138-139, 186), where polysemy and homonymy are not viewed as an opposition, but as a scale with several degrees of formal and semantic unity. Cf. also Robins (1987: 66), Tuggy (1993), Murphy (2010: 91-93), Rainer (2014: 339).

⁴ Where possible, the languages used for examples are the three most widely spoken languages according to *The Ethnologue: Languages of the World (2017)* and UNESCO data, namely Mandarin Chinese, English and Spanish, in this order. All the definitions are according to *The Oxford English Dictionary* (<http://www.oed.com>, last access 15/02/18). Examples of Mandarin Chinese rely on Wu (2003) and Arcodia (2014).

⁵ Cf., e.g., Beard (1990), Lehrer (2003), Rainer (2005b, 2014), Plag (2003), (Booij, 2010: 81, cited in Arcodia, 2014), Bauer, Lieber & Plag (2013), Baeskow (2015). For a review of semantic functions of English affixes, cf., among others, Marchand (1969), Dalton-Puffer (1996: Appendix 2), Luschützky & Rainer (2011), Arcodia (2014) or Rainer, Dressler, Gardani & Luschützky (2014: 4-6). For studies on other affixes, cf., e.g. Booij & Lieber (2004) and (Booij, 2007) on English and Dutch.

⁶ Cf., among others, Kastovsky (1971) for English, (1997: 308-309) for German, Gaeta & Ricca (2003) for Italian, and Rainer (2005b, 2014) and Luschützky & Rainer (2011) for several languages.

⁷ Cf. Plag (1999: 235).

⁸ Cf. Jespersen (1933: 73, 1909-49, VI: 84). Cf. also, e.g. Kerleroux (1999) or Bergenholtz & Agerbo (2014: 29).

⁹ Cf., for example, Leech (1974: 214-216), Akmajian, Demers, Farmer & Harnish (1995: 25) in favour of a significant change of meaning, versus Deane (1988: 350), where the senses for each grammatical category '[...]' differ little in relevant information content'; cf. similarly Beard (1998: 60) on transposition. Other authors, e.g. Murphy (2010: 96) and Koskela & Murphy (2006: 743) refer to the semantic contrast entailed by changes in categorial meaning as *senses* (even if their use of the term may not be as other authors' for the variations of a central meaning) and 'as a pattern of regular polysemy'.

¹⁰ As defined by Pounder (2000: 98) '[...] the meaning a word has by virtue of being noun or verb, etc.'

¹¹ Cf., e.g. Deane (1988: 349), Goddard (1998: 23), Dirven (1999, cited in Rainer, 2014: 339), or Koskela & Murphy (2006: 743). Cf. also Nida's (1975: 97-99) description of homophones that are semantically related, versus homophones that are not, and where the former are 'a single morpheme' and the latter are not. Other authors exclude polysemy, as there is a change in the word class (Béjoint, 2010: 299).

¹² For a review of causes of violation of isomorphism, cf. Haiman (1980). For opposite interpretations of the type of meaning extension involved in polysemy, compare Natural Morphology's view of metaphor and metonymy as not natural techniques (precisely because they violate the preference for isomorphism, cf. Luschützky, 2015: 129), versus the lexicographer's view of this type of strategies as economical resources for language's reference of the world (cf. Hagège, 1985: 126, cited in Béjoint, 2010: 286, Lipka, 1990: 139, Tournier, 2007: 199).

¹³ The literature cites other less substantial differences, like the institution of each term in linguistics, but not always to the same degree of accuracy. Thus, the literature often cites

Robins' (1987: 73) contrast between Bréal's definition of polysemy in 1897 ('[...] phénomène de multiplication [des sens]') versus Aristotle's use of the technical term *homonymy* as early as in Classical Antiquity. Cf., however, Rainer (2014: 338-339) for a clearer account, where both polysemy and homonymy are explained as attested in Classical Antiquity, even if the actual term *polysemous* is attested in English later. For a comprehensive account of the various interpretations and implications of *homonymy* in Aristotle, cf. Ward (2010).

¹⁴ This terminological distinction is not systematic, and what is today usually referred to as *sense* is called *meaning* in, e.g. Leech (1974: 102), Nida (1975), or Palmer (1981). For this use of the term *sense*, cf., e.g. Lipka (1990: 183).

¹⁵ Cf. Lyons (1977, II: 550 et passim, 1981a: 147), Paul (1982: 294-303), Lipka (1986: 129 et passim, 1990: 136 et passim), Cf. especially Kastovsky (1982: 123, cited in Lipka, 1986: 131-132).

¹⁶ Cf., among others, Leech (1974: 76-69), Robins (1987: 69), Booij (2005: 221-223). On the relevance of context, cf. Nunberg (1979), and specifically on the influence of domain, cf. Heine, Claudi & Hünnemeyer (1991). Cf. also the term *Monosemierung* (monosemization) as the resolution of polysemy by way of contextual reference in Lipka (1990: 173-174, 184). A specific type of homonym by the name of 'semantic homonymy' was defined by Marchand (1969) for various interpretations of relational forms like *musical* (e.g. in *musical clock*, *musical theory* or *musical comedy*). This interpretation has been dismissed (e.g. in Rainer, 2014: 350) and the various interpretations have been explained instead as '[...] induced by the context on the basis of encyclopedic information'; in this regard, cf. also Traugott & Dasher (2002) on pragmatic meaning viewed as polysemy.

¹⁷ Cf. Southworth (1967: 357), Malkiel (1976: 61 et passim, cited in Robins, 1987: 60), Palmer (1981: 102 et passim), Murphy (2010: 87-91), Bergenholtz & Agerbo (2014: 29), Rainer (2014: 339). Cf. also Croft & Cruse (2004: 111) and Gaeta (2010) on the relevance (but also the difficulty in practice) of ascertaining common etymological origin for attestation of homonymy.

¹⁸ Cf. Leech (1974: 228-229), Palmer (1981: 103-106), Cruse (1986: 80), Robins (1987: 53, 60), Lipka (1990: 182), Tournier (2007: 49-50), Murphy (2010: 91, 94-96), Bergenholtz & Agerbo (2014: 28), Rainer (2014: 339). On the contrast between polysemy and vagueness at the lexical level, i.e. the ambiguous reference of a unit, cf. Kearns (2006: 568), Béjoint (2010: 300-303) or Murphy (2010: 84-87), and Rainer (2014: 339-340) with a focus on morphology. Cf. also Hansen et al. (1985: 202, cited in Lipka, 1990: 138) Pilch (1984), Kearns (2006), Lehrer (2003), Béjoint (2010: 296-297, 299), Arcodia (2014) or Rainer (2014) for patterns of polysemic relations. Cf. also Béjoint (2010: 291) on the relevance of context analysis for identification of patterns of use in polysemy.

¹⁹ Similarly, the *Merriam-Webster Dictionary* (<https://www.merriam-webster.com/>) separates entries for *be* according to lexical or auxiliary verb, but not within each of these two. For other examples, like, e.g. *case* ('a set of circumstances or conditions' vs. 'a box or receptacle for holding something') it lists all possible senses as numbered subheadings within one entry. A similar policy can be found in the *Diccionario de la Real Academia de la Lengua Española* for Spanish.

²⁰ On the reactions to these tests and what they suggest about the relationship between senses, cf. Cruse (1986: 49 et passim), Lehrer (2003: 229) or Murphy (2010: 84-91).

²¹ For a review of the types of these changes, cf., among others, McMahon (1994), Rainer (2005a) or Arcodia (2014).

²² Cf., among many others, Tournier (2007: 203-206), Béjoint (2010: 286-288).

²³ Cf. Ullmann (1951: 115, cited in Robins, 1987: 54), Lyons (1981a: 147-148), Robins (1987: 71), Lipka (1990: 140).

²⁴ Cf. in this regard the relevance granted to speaker judgment on meaning relatedness by a number of authors, e.g. Leech (1974: 228), Nida (1975: 104), Robins (1987: 71), even if this is naturally to the detriment of objective assessments (cf. Koskela & Murphy, 2006: 743, Rainer, 2014: 339).

²⁵ For a review of the role of bases for the selection of specific senses of polysemous affixes, cf. Aronoff & Cho (2001) and Baeskow (2010, 2015).

²⁶ Cf., among others, Clark & Clark (1979: 800), Dressler (1987: 113, 116), Plag (1999: 50).

²⁷ For a review, cf. Rainer (2016).

²⁸ For a review, cf., among others, Mätzner (1873), Leech (1974: 229), McMahon (1994: 105), Lass (1994: 234, 250-252). A detailed account can be found in Moore (1927, 1928, 1968). For a discussion of homonymy and a distinction of accidental versus systematic homonymy in inflectional paradigms, cf. Carstairs-McCarthy (1987) and Barðdal & Kulikov (2008); cf. also, e.g. Calabrese (1998), Loporcaro (2011), and Hinzelin (2012) for Romance languages.

²⁹ Cf. also Plank (1990) for an exhaustive analysis.

³⁰ Also as irregular forms, e.g. English *drunk*^V (the past participle of the verb *to drink*) versus *drunk*^{Adj} ('That has drunk intoxicating liquor to an extent which affects steady self-control'), or Spanish *cubierto*^V (the past participle of the verb *cubrir* 'cover') versus *cubierto*^N 'piece of cutlery'.

³¹ Cf. also the forms in *-ido* that may express state but may also be resultative, e.g. *aburrido* 'bored' versus 'boring' Rainer (1999: 4604).

³² Cf. Wik (1973). Cf. also Quirk & Wrenn (1957: 112), Marchand (1969: 302-305), Dalton-Puffer (1996: 37-39), Tabor & Traugott (1998: 240-244), Akmajian, Demers, Farmer & Harnish, 1995: 38), Fanego (2006).

³³ Cf. Lyons (1977: 552) and Ullmann (1951: 115), cited in Robins (1987: 53-54).

³⁴ For a review, cf. Murphy (2010: 99-104) and Rainer (2014: 340-341). Cf. also Béjoint (2010: 297) argument on mixed models.