Form and meaning in morphology: the case of Dutch 'agent nouns'*

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Abstract

Some morphologists have proposed the separation of form and meaning in morphology because of the lack of a one-to-one correspondence between them. In this paper it is shown that this position is ill-advised since it impedes a deeper insight into the systematics of the interpretation of complex words. This is demonstrated by a detailed study of one affix, the deverbal suffix -er *in Dutch, which creates subject names. The apparent polysemy of this suffix appears to follow from independent, nonlinguistic principles.*

1. Introduction

It is a truth universally acknowledged that natural languages do not exhibit an absolute one-to-one correspondence between meaning and form. This also applies to a subset of linguistic expressions, the affixes. For instance, Dutch deverbal nouns in *-er* seem to have a number of different meanings (see Moortgat and van der Hulst 1981):

(1)	a.	subject name	spel-er 'player'	< spel-en[1] 'to play'
	b.	object name	bijsluit-er 'enclosure'	< bijsluit-en 'to enclose'
	c.	instrument name	open-er 'opener'	< open-en 'to open'
	d.	event name	treff-er 'hit', 'goal'	< treff-en 'to hit'
	e.	causative name	gill-er 'what makes you scream'	< gill-en 'to scream'

On the other hand, Dutch has a number of competing suffixes which also create deverbal subject names, as illustrated in (2):

(2)	-ant	predik-ant 'preacher'	< predik-en 'to preach'
	-ateur	repar-ateur 'repairer'	< reparer-en[2] 'to repair'
	-ator	organis-ator 'organizer'	< organiser-en 'to organize'
	-ent	assist-ent 'assistant'	< assister-en 'to assist'
	-eur	mont-eur 'assembler'	< monter-en 'to assemble'

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This lack of one-to-one correspondence between form and meaning is referred to as 'morphological asymmetry' by Beard (1984), and this asymmetry has led several morphologists to disconnect form and meaning in morphology (for example, Jackendoff 1975; Beard 1981, 1984; Moortgat and van der Hulst 1981). For instance, Beard (1981, 1984) distinguishes between derivation rules (rules that create words with a certain type of meaning, such as agent nouns) and affixation rules (rules that carry out the formal operation of affixation).

In this paper I will argue that the separation of form and meaning in morphology is not a step in the right direction. The link between the two is the essence of any linguistic system, and should not be given up too hastily. My claim is that, if we start from the one form/one meaning hypothesis, not as an a priori, but as a heuristic principle, we will gain much more insight into the morphological system of a language.

The paper is structured as follows. In section 2 I will present a short analysis of the problem of competing affixation processes and will argue that they cannot be accounted for by means of one rule. Section 3 surveys the types of explanation that have been put forward to explain the polysemy of derived words. In section 4, the core of the paper, the polysemy of Dutch deverbal nouns in *-er* will be analyzed and explained. Section 5 summarizes the conclusions.

2. Synonymous affixes

As pointed out above, the existence of synonymous affixes has been used as one of the arguments for disconnecting form and meaning in morphology. A more modest and more precise approach is advocated by Zwanenburg (1980, 1984) in his theory of 'derivation types'. A derivation type is 'a set of derivation processes which are characterized by the use of bases of a given lexical category and of a set of suffixes of a given lexical category and which have the same global meaning' (Zwanenburg 1984: 138). An example is the English deverbal action noun that is accounted for by the following rule:

(3) $[x]_V \rightarrow [[x]_V \left\{ \begin{matrix} al \\ ion \\ ment \end{matrix} \right\}]_N$ 'act of x'

Zwanenburg gives three arguments for this kind of rule for competing suffixes: (i) it expresses that these suffixes have the same meaning; (ii) it accounts for blocking; (iii) these derivation types are universal within certain limits.

In my opinion, these arguments are not very convincing. Synonymy of affixes is also expressed, be it indirectly, by adhering to Aronoff's (1976) one-affix-a-rule hypothesis and writing separate rules for each of the synonymous suffixes. The blocking argument is also problematic. First, the formulation of rule (3) by itself does not account for blocking because it does not express that the rule may apply only once to a given verbal stem. Moreover, blocking cannot be seen as an absolute principle; it is at most a tendency that we find in certain areas of word formation. After all, languages admit a lot of doublets, synonymous words derived from the same stem (see Booij 1977, Scalise 1984). Finally, the universality argument has an unclear status anyway.

Another, very crucial, point is that competing affixes may differ with respect to their productivity and distribution (the kind and number of conditions that they impose on their base words), as has been stressed by Corbin (1984) and van Marle (1985). This cannot be expressed by rules of the kind in (3).

For all these reasons, we should adhere to the one-affix-a-rule hypothesis and develop a more sophisticated theory of how word-formation rules with competing affixes interact. A first approach to such a theory can be found in van Marle (1985).[3] Van Marle discusses in detail how a number of Dutch derivational feminine suffixes compete and accounts for this competition by the domain hypothesis (see van Marle, this volume, for a discussion of this hypothesis).

3. Types of explanation for polysemy in derived words

Above we saw that the deverbal suffix *-er* in Dutch exhibits polysemy in that it seems to create at least five semantic classes of deverbal nouns. Before we jump to the conclusion that *-er* is a 'polyfunctional' suffix, we should investigate whether this variation in interpretation can be accounted for by a theory of polysemy, thus enabling us to maintain a more direct connection between form and meaning in morphology.

There are three different types of explanation for the polysemy of derived words. The first one is to associate one very general and vague meaning (a *Gesamtbedeutung*; Jakobson 1936 [1962]) with the word-formation process. The specific interpretation of a complex word created by such a word-formation process is then determined by context, situation, and/or knowledge of the world. This type of explanation is particularly adequate for the explanation of the variation in meaning relations between the two constituent parts of compounds. With respect to the meaning of a compound $[A\ B]_C$ in languages like English and

Dutch, where the right constituent B is the head, all we can say about meaning from a language-structure point of view is that it is a B that is somehow related to A. For instance, an *apple tree* is a *tree* somehow related to *apple*, as is *pie* in *apple pie*, but the specific interpretation of this relation is determined by knowledge of the world. In other cases, in particular when new compounds are coined, context and situation may also play a decisive role (see Downing 1977). The same holds for the meaning relation between noun and verb in denominal verbs in Dutch and English derived by means of implicit transposition (zero suffixation), as is shown in Booij (1979), and for a number of denominal adjectival suffixes in French (see Zwanenburg 1980).

The second type of explanation for polysemy is to assume one core or prototypical meaning for a certain word-formation process, and to derive the other meanings by means of extension rules. This is basically the type of explanation that will be defended for the polysemy of the Dutch deverbal suffix *-er* in the next section.

A third type of explanation for the polysemy of derived words, in particular for deverbal nouns, is that this polysemy reflects differences in the thematic grid (θ-grid) of the verbal bases. The thematic grid of a verb is a specification of the thematic roles that it imposes on its arguments (that is, its complements and its subject). For instance, the θ-grids of the verbs *escape* and *employ* may be represented as follows:

(4) escape, V, ↑ [———]
Agent

employ, V ↑ [——— NP]
↑
Agent Theme

Both verbs impose the thematic role of Agent on their external argument, the subject. Note now that the English suffix *-ee* creates both subject names (such as *escapee, retiree, returnee*) and object names (such as *employee, examinee, nominee*). This polysemy follows if we qualify *-ee* as a suffix that creates Theme names (Randall 1984).[4] In the intransitive verbs *escape, retire*, and *return* the thematic role of Theme is linked to the subject position. However, in the case of transitive verbs like *nominate, employ*, and *examine* the Theme role is linked to the object position (and the Agent role to the subject position). Thus, the difference between subject-name interpretation and object-name interpretation follows from differences in the θ-grids of verbal bases.

Knopper (1984) gives a similar analysis of the polysemy of the Dutch deverbal suffix *-sel* that also creates both subject and object names:

(5)	i.	subject names:	aanslibsel 'deposit'	< aanslibb-en 'to form a deposit'
			bezinksel 'sediment'	< bezink-en 'to settle'
	ii.	object names:	tiksel 'typing'	< tikk-en 'to type'
			baksel 'baking'	< bakk-en 'to bake'

Again, if we assume that *-sel* creates Theme names, the polysemy follows from the differences in the θ-grids of the verbal bases: in the θ-grid of the intransitive verbs in (5i) the Theme is linked to the subject position, but in the θ-grids of the transitive verbs of (5ii) the Theme is linked to the object position.[5]

In sum, at least three types of explanation are available for the polysemy of derived words. In the next section I will discuss the relevance of these explanation types for the polysemy of Dutch deverbal nouns in *-er*.

4. Polysemy and deverbal nouns in *-er*

Traditionally, Dutch deverbal nouns in *-er* — and the same holds for the analogous word type in English and German — are called agent nouns (*nomina agentis*). However, it is more adequate to call them subject names, because the basic effect of the suffix *-er* is that it binds whatever θ-role is linked to the subject position of the base verb.

The notion 'subject' used here is a grammatical notion, not a semantic or logical one. By qualifying *-er* as a suffix that creates subject names, we are able to exactly demarcate the systemic contribution of the suffix *-er* to the interpretation of deverbal nouns ending in this suffix. A notion like 'agent noun', on the other hand, is a derived semantic category, resulting from the interaction of the grammatical qualification of deverbal *-er* nouns with other, semantic properties of the verbal bases.

In the majority of cases, it is the θ-role of Agent that is linked to the subject position, and thus *-er* creates agent nouns for such verbs. However, there is also a category of intransitive verbs where the subject position is linked to the Theme role. Hence, the *-er* noun derived from such verbs is not an agent noun, as is illustrated in (6):

(6)	*Verb with Theme subject:*	*deverbal noun:*
	dal-en 'to drop'	dal-er 'dropper'
	stijg-en 'to rise'	stijg-er 'riser'
	groei-en 'to grow'	groei-er 'grower'
	zink-en 'to sink'	zink-er 'sinker', 'underwater main'
	uitlop-en 'to sprout'	uitlop-er 'offshoot'
	meevall-en 'to exceed expectation'	meevall-er 'piece of good luck'
	uitvall-en 'to drop out'	uitvall-er 'dropout'
	brek-en 'to break'	brek-er 'wave that breaks'

The verbs in (6) are a subset of the class of so-called unaccusative verbs (see Hoekstra 1984). One of the characteristics of these verbs is that they select *zijn* 'to be' as their auxiliary, whereas other verbs, transitive or intransitive, select *hebben* 'to have' as auxiliary.

There are many other intransitive verbs in Dutch which, although they select *hebben* as their auxiliary, do not have a subject with an active, agentive role, such as *bloeien* 'to bloom', *branden* 'to burn', *druipen* 'to drip', and *drijven* 'to float'. Presumably, their θ-role is that of Theme. These verbs also allow for derived nouns in *-er*: *(laat)bloeier* '(late) bloomer', *brander* 'burner', *druiper* 'dripper', and *drijver* 'floater'. This shows again that 'subject name' rather than 'agent noun' is the correct characterization of deverbal nouns in *-er*.

By qualifying *-er* nouns as subject nouns, we also predict that verbs without a lexical subject, for instance the verbs that trigger NP-raising, do not have a corresponding *-er* noun:

(7)			
	Dutch:	schijnen 'to seem'	*schijner
		blijken 'to appear'	*blijker
		lijken 'to seem'	*lijker
	English:	to happen	*happener
		to seem	*seemer
		to appear	*appearer

The exact delimitation of the class of verbs without a lexical subject deserves some discussion. Hoekstra (1984) hypothesizes that ALL verbs that select the auxiliary *zijn* are subjectless in the lexicon. Their surface subjects are derived syntactically by means of NP-movement. Hoekstra (1984: 261) points out that if one assumes that *-er* binds the subject argument, this predicts that no unaccusative verb has a corresponding noun in *-er*. Following Hoekstra's analysis, Knopper (1984: 121) argues that a noun like *sneuvelaar* 'dier' is indeed ill formed and that this follows from the assumption that the base verb has no lexical subject. However, the data in (6) show that the prediction that no verb that selects *zijn* as its auxiliary has a corresponding noun in *-er* is incorrect. The oddness of *sneuvelaar*, *sterver* 'dier', etc., can be explained by semantic considerations.[6] As a matter of fact, words like *sterver* are well formed, since a sentence like *Hij is een goede sterver* 'He is a good dier' is perfectly appropriate when said of, for instance, an actor who has to die on the stage.

In addition to (6) the following verbs with *zijn* also have a noun in *-er*:

(8)		
	blijv-en 'to stay'	blijver 'stayer'
	beginn-en 'to begin'	beginner 'beginner'
	kom-en 'to come'	komer 'comer'
	uitbrek-en 'to escape'	uitbreker 'escapee'

These data suggest that a subset of the verbs that select *zijn* should be specified in the lexicon as having a Thematic subject.[7]

4.1. *Agents and instruments*

We now return to the problem of the polysemy of deverbal nouns in *-er*. My basic claim is that the conceptual category Agent that is associated with *-er* nouns derived from verbs with an Agent subject can be extended according to the following extension scheme:

(9) Personal Agent > Impersonal Agent > Instrument

This extension scheme accounts for, for instance, the three interpretations of the Dutch noun *zender* 'sender': (1) person who sends, (2) radio/tv station, (3) transmitter. As Dressler (this volume) argues, personal agents may be seen as the prototypical agents because the prototypical interpretation of agents is human. This would imply that Impersonal Agents and Instruments are less typical Agents. Such an interpretation of scheme (9) ties in with the general theory of conceptual categories of Rosch (1977). Basic ingredients of this theory are that conceptual categories have more and less prototypical instantiations, and that the transition from more to less prototypical categories is a fluent one.

Another possible interpretation of scheme (9) is to interpret it as a semantic construal rule that defines how meaning extensions are derived from core meanings. Such construal rules have been proposed by Miller (1978). We leave the choice between the interpretations of scheme (9) as a subject for further research.[8]

Before discussing scheme (9) and its claims in more detail, I will present a survey of Dutch *-er* nouns of the three semantic subcategories, as shown in Table 1.

The observation that agent nouns can be used as instrument nouns is well known from the morphological literature. For instance, Benveniste (1948: 61) wrote with respect to agent nouns in French,

> Il importe peu que ces mots en *-(t)eur* désignent des hommes ou des instruments, c'est là affaire de 'parole', de nécessités locales et imprévisibles. On ne devinerait pas, si on ne le savait, que *chauffeur* s'applique à un homme, *brûleur* à un appareil, et il est d'ailleurs inévitable, dans une civilisation de plus en plus mécanisée, que les tâches humaines s'assimilent à des fonctions d'instruments.

However, what is stressed by scheme (9) and Table 1 is that the category Impersonal Agent is not the same as Instrument, but an intermediate and mediating category. The presence of agentivity in the class of Impersonal

Table 1. *Survey of Dutch* -er *nouns*

Personal Agent	Impersonal Agent	Instrument
arbeider 'worker'		
bidder 'pray-er'		
lijder 'sufferer'		
zender 'sender'	zender 'radio/tv station'	zender 'transmitter'
binder 'binder'	(zelf)binder '(self)binder'	(hooi)binder '(hay)binder'[9]
jager 'hunter'	(marine)jager '(marine)hunter'	(marine)jager '(marine)hunter'
leider 'leader'	urineleider 'ureter'	
vlieger 'flyer', 'pilot'	vlieger 'flyer', 'kite'	
kerkganger 'churchgoer'	blindganger 'blind-goer'	
houder 'keeper'	borstelhouder 'brush holder'	
	blaffer lit. 'barker', 'gun'	
	klinker lit. 'sounder', 'vowel'	
	(zelf)vernietiger '(self)destroyer'	
	(zelf)ontspanner lit. '(self)relaxer'	
	zoemer 'buzzer'	
	wijzer lit. 'pointer', 'hand of a clock'	
	rookmelder 'smoke reporter'	brandmelder 'fire alarm'
kneder 'kneader'		kneder 'kneader'
snijder 'cutter'		strosnijder 'straw cutter'
doder 'killer'		ploertendoder 'dagger'
messetrekker lit. 'knife puller', 'fighter'		kurketrekker 'corkscrew'
teller 'counter'		toerenteller 'rev(olution) counter'
speler 'player'		platenspeler 'record player'

Agent nouns is particularly clear from compounds of *-er* nouns and the word *zelf* 'self', since the use of *zelf* presupposes the presence of an agent.

Another important point to be observed here is that the boundaries between the conceptual subcategories of Agent are fuzzy. For instance, it is hard to determine whether a *kustvaarder* 'coaster' is an Impersonal Agent or an Instrument. Also, the interpretational difference between *rookmelder* 'smoke reporter' and *brandmelder* 'fire alarm' is rather subtle. *A rookmelder* is an automatic device (and thus an Impersonal Agent), whereas a *brandmelder* is a nonautomatic device and therefore an Instrument.

By claiming that Personal Agent is the prototypical or core meaning, we predict that this interpretation of *-er* nouns is always possible, although it may not be an established use of a certain noun. This is a

correct prediction. For instance, a dog that barks a lot can always be called a *blaffer* 'barker', and someone who reports something a *melder* 'reporter' (see Table 1 for the standard interpretations of these words).

It will be clear that if scheme (9) is correct, the polysemy that we find for *-er* nouns should also be found for other types of derived words with an Agent interpretation. Moreover, since the structure of conceptual categories is presumably language-independent, we expect the same polysemy to exist for agent nouns in other languages. Both predictions are confirmed by the facts. First, other suffixes of Dutch exhibit the same polysemy, as shown in Table 2.

Other languages also exhibit the same polysemy, as was observed by Panagl (1978) and Dressler (1980). For instance, we find it for English *-er*, German *-er*, French *-(t)eur*, and Italian *-(t)ore*. Of course, the actual polysemy of 'agentive' suffixes may be blocked by the fact that a language possesses a special instrumental suffix, as is the case for Finnish. But even then one sometimes finds agent nouns used as instruments. For instance, Finnish *muun-nin* (derived from the verbal stem *muun-* 'to change'), with the instrumental suffix *-nin*, is the normative form of the word for 'transformer'. Yet, native speakers of Finnish prefer the form *muuntaya*, with the agentive suffix *-ya*.[10]

The idea that Personal Agent occupies a more central position in the conceptual category Agent than Instrument is also confirmed by the facts of language acquisition. Clark and Hecht (1982) stress the primacy of Personal Agent with respect to Instrument in the acquisition of English *-er* nouns. This primacy is nicely illustrated by the following dialogue mentioned in their paper:

Table 2. *Dutch suffixes that exhibit polysemy*

Personal Agent	Impersonal Agent	Instrument
organisator 'organizer'		condensator 'condenser'
inspirator 'inspirer'		perforator 'perforator'
reparateur 'repairer'		regulateur 'regulator'
provocateur 'provoker'		vaporisateur 'vaporizer'
collectant 'collector'	consonant 'consonant'	
predikant 'preacher'	variant 'variant'	
surveillant 'overseer'	dissonant 'dissonant'	
assistent 'assistant'		component 'component'
recensent 'reviewer'		exponent 'exponent'
ponseuse 'puncher'		tondeuse 'hair clippers'
coupeuse 'cutter'		friteuse 'deep-fat fryer'

(10) Yara: 'What's that called?'
Mother: 'A typewriter.'
Yara: 'No, you're the typewriter, that's a typewrite.'

Clark and Hecht (1982) also found that if a child used *-er* consistently for only one of its meanings, the majority used it consistently in its agent interpretation.

Interestingly, the primacy of Personal Agent with respect to Instrument was also found by Clark and Berman (1984: 582–583) in their investigation of the acquisition of Hebrew morphology: 'In summary, coinages for agents and instruments suggest that speakers conceive of these two lexical classes as belonging to a single category, in which agents are more central than instruments'.

It is perhaps useful to stress the point that the categories in (9) are conceptual categories, not linguistic categories. The linguistic category Agent can be found as θ-role in the θ-grid of verbs: it is a grammaticalization of the conceptual category Agent with respect to verbs. Consequently, we do not find the easy interpretational shift of Personal Agent to Impersonal Agent or Instrument in the θ-grids of verbs. Compare:

(11) a. Ik smelt het ijs, 'I melt the ice.'
b. ?De warmte smelt het ijs, 'The heat melts the ice.'

(12) a. Ik sla met de hamer op de spijker, 'I hit with the hammer on the nail.'
b. ?De hamer slaat op de spijker, 'The hammer hits on the nail.'

In conclusion, we find that by structuring the category Agent as proposed in (9) we are able to account for an important part of the polysemy of deverbal nouns in *-er*.

4.2. *'Logical-object' names*

A number of deverbal *-er* nouns are interpreted as referring to the logical object of the verbal base, as shown in (13):

(13) i.

instapper 'shoe without shoelaces'	instappen 'to get in'
bijsluiter 'enclosure'	bijsluiten 'to enclose'
aanrader 'thing one should buy'	aanraden 'to advise'
meezinger 'popular song'	meezingen 'to sing along'
inruiler 'trade-in'	inruilen 'to trade in'
doordenker 'problem that needs thorough reflection'	doordenken 'to reflect'

ii.

rokertje 'something to smoke'	roken 'to smoke'
krijgertje 'gift'	krijgen 'to receive'

This category of *-er* nouns has a number of specific properties. First, the category is not productive. Second, the meanings of these object names are rather idiosyncratic, as the paraphrases clearly show. Finally, some of these nouns, those in (13ii), only occur in their diminutive form, with the diminutive suffix *-tje*. For instance, *roker* 'smoker' is usually interpreted as 'smoker', and not as 'something to smoke'.

One might hypothesize, then, that these nouns can be derived from so-called middle verbs (see Keyser and Roeper 1984), verbs with Themes as subjects. For instance, in English we have the deverbal noun *bestseller* derived from the verb *to sell* as it is used in, for example, *This book sells well*, in which *this book* is the Theme of *sells*. Randall (1984) mentions some other examples like *This meat is an easy frier*, parallel to *This meat fries easily*. This middle verb construction requires the presence of an evaluative expression such as *well* or *easily*. Similarly, one might consider deriving the Dutch derived noun *inruiler* (cf. 13i) from the middle verb *inruilen* as used in *Deze auto ruilt goed in* 'This car trades in well'. Note, by the way, that Dutch exhibits a clear formal difference between unaccusative verbs and middle verbs (both of which have Themes in surface subject position): unaccusatives select *zijn* as their auxiliary, but middle verbs select *hebben* (as in *Dit boek heeft goed verkocht* 'This book has sold well').

The hypothesis that object nouns are derived from middle verbs explains the polysemy of *-er* nouns in a way that is similar to the explanation we saw above for the polysemy of *-ee* nouns in English, because the polysemy follows from the difference in θ-grid between 'normal' verbs and middle verbs. This hypothesis also presupposes, contrary to what Keyser and Roeper (1984) defend for English middle verbs (that middle verb constructions are derived syntactically by means of NP movement), that middle verbs in Dutch are derived lexically: if middle verbs were derived in syntax, it would be impossible for the rule of *-er* affixation, which applies in the lexicon, to apply to such verbs. There is independent evidence for this assumption, since Dutch exhibits middle-verb constructions for which there is no possible syntactic source. For instance, the verb *zitten* is intransitive, and yet it has a middle-verb counterpart:

(14) Die bank zit lekker, 'That couch sits comfortably.'
*[ ]$_{NP}$ zit die bank lekker
[ ]$_{NP}$ zit lekker op die bank, 'NP sits comfortably on that couch.'

The hypothesis that middle verbs, with Thematic subjects in their lexical representations, are the source of *-er* nouns with a logical-object name interpretation correctly predicts that it is possible to coin a noun like *zitter* derived from the middle verb *zitten* as shown in (14). We find this noun in compounds like *tweezitter* 'two-seater'.

However, some nouns derived from middle verbs make a rather odd impression, for instance those in (15):

(15) i. Deze sigaar rookt lekker, 'This cigar smokes nicely.'
?Deze sigaar is een lekkere roker, 'This cigar is a nice smoker.'
ii. Dit brood snijdt gemakkelijk, 'This bread cuts easily.'
?Dit brood is een gemakkelijke snijder, 'This bread is an easy cutter.'

This also applies to *zitter* when not preceded by *twee-*: *?Deze bank is een goede zitter* 'This couch is a good sitter'.

Moreover, logical-object names can be used without the evaluative expression that is required for middle verbs, which also casts doubts on the assumption of a relation between middle verbs and logical-object names. This is illustrated in (16):

(16) i. *Dit boek raadt aan, 'This book advises.'
Dit boek is een aanrader, lit. 'This book is an adviser = This book is worth buying.'

Finally, we also find deverbal logical object names in *-aar*, an allomorph of *-er*, such as *gijzelaar* 'hostage' and *martelaar* 'martyr'. Again, these formations have a marginal, incidental character which is evident from the fact that native speakers of Dutch are inclined to reinterpret these words as subject names, for example *gijzelaar* as someone who holds people hostage.

Thus we conclude that the logical-object name interpretation of certain nouns in *-er* and its allomorphs is of a nonsystematic character, as opposed to the interpretations discussed previously. Therefore, they cannot be used as evidence against the hypothesis that in morphology form and meaning are linked in systematic ways.

4.3. *Other interpretations of* -er *nouns*

The other interpretations of the *-er* nouns mentioned in (1) are very marginal, unproductive, and idiosyncratic. I mention here a few other examples:

(17) event names: sisser 'hisser' (only in the expression *Het loopt met een sisser af* 'It's a flash in the pan.'
misser 'failure'
causative name: afknapper 'what makes you break down'
dijenkletser 'what makes you slap your thighs', or 'what makes you laugh'

Again, such marginal cases cannot be used as arguments for a principled separation of form and meaning in morphology.

5. Conclusions

Those morphologists who seek to separate form and meaning in morphology are on the wrong track. The distinction between derivation and affixation as proposed by, for example, Beard (1981, 1984) impedes an insightful analysis of morphological systems. Synonymous affixes cannot be conceived of as variant formal expressions of the same 'derivation type', because they may differ in distribution and productivity. The polyinterpretability of certain affixes also shows a certain systematicity, once we distinguish between productive and unproductive interpretations. It appeared that the productive interpretations of Dutch deverbal *-er* nouns (personal agent, impersonal agent, instrument) all follow from the characterization of *-er* as an affix that binds the subject argument of the input verb, in combination with a hypothesis about the structure of the conceptual category Agent. Therefore, there is no reason to be pessimistic about the possibility of maintaining the connection between form and meaning in derivational morphology.[11] Of course, this does not mean that there are no homonymous affixes, but morphology should not be seen as a subsystem of language where form and meaning cannot be related as a matter of principle.

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Notes

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1. *-en* is the inflectional ending of the citation form, the infinitive.
2. In deriving deverbal nouns from verbal stems ending in *-eer*, *-eer* disappears before the suffixes listed in (2).
3. See in particular Van Marle (1985: 164, note 26) for objections to the 'derivation type' theory.
4. Carrier-Duncan (1985: 32–33) gives a variant of this analysis, in which *-ee* is characterized as follows: 'the *-ee* noun corresponds to the highest non-agent role that can be animate'.

5. Knopper (1984) actually assumes that the intransitive verbs in (5i) are so-called unaccusative verbs with no subject argument in the lexicon. Thus, he is able to uniformly qualify *-sel* nouns as object names without specifying the nature of the θ-role involved. Below, I will return to this issue.
6. The same point is made by Randall (1984: 317): 'only those verbs which refer to either protracted or repeated action can form *-er*-nouns'.
7. Keyser and Roeper (1984) come to the same conclusion with respect to unaccusative (or ergative) verbs in English like *to break* and *to melt*.
8. See Jackendoff (1983) for further discussion of the general issues relating to the problem of word meaning.
9. Verbal compounds like *hooibinder* are listed here as examples of deverbal nouns because they should be considered as compounds whose second constituents are deverbal nouns. See Selkirk (1982) for arguments for the compound interpretation of verbal compounds.
10. Outi Merisalo, personal communication.
11. A similar conclusion is reached by Randall (1984), who analyzes the polyinterpretability of deverbal nouns in *-ing* in English, in particular the 'action' vs. 'result' interpretation, and shows how these two interpretations can be predicted in a systematic way.

    These conclusions pertain to derivational morphology only. In inflectional morphology we find a lot of syncretism, different cases expressed by the same suffix, and this may ask for a differential treatment (see Matthews 1984).

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