Typology, Diachrony, and Universals of Semantic Change in Word-Formation:
A Romanist's Look at the Polysemy of Agent Nouns

Franz Rainer
Vienna University of Economics and Business Administration
franz.rainer@wu.wien.ac.at

1.   Introduction

It may be considered as part of the common body of knowledge of students of word-formation that agentive suffixes tend to have at the same time instrumental and, to a lesser extent, locative and other meanings. By the end of the nineteenth century, for example, Meyer-Lübke (1890) explained this polysemy as a consequence of the metaphorical use of agent nouns as designations of instruments (§ 498) and pointed out the conceptual ambiguity of containers between instrumental and locative nouns (§ 497). Similar observations on the polysemy of agent nouns can be found over and over again in the literature, but we have to wait until the 1970s in order to see appear the first studies dedicated specifically to this putative language-universal. In those times, Harald Haarmann and Oswald Panagl independently published several articles on the topic, presented as preludes to in-depth typological studies that they had the intention to undertake, intentions, unfortunately, never realised. But due to Panagl's pioneering study – Haarmann's articles, as far as I can see, have gone totally unnoticed – the subject had been effectively placed on the agenda of students of word-formation, sparking off a considerable amount of contributions up to the present day.

It is my intention here to review this by now conspicuous literature, to single out the main hypotheses and to assess their validity, especially on the background of the Romance languages. We will thus be concerned, on the one hand, with empirical issues, but on the other our discussion will always be guided, in accordance with the general theme of the Catania meeting, by the question of what typological research may contribute to our understanding of word-formation, and what methodology it should (not) adopt. The order of presentation will be, by and large, chronological, which allows us to draw, at the same time, a genre picture of research styles and habits in this area of linguistics.

2.   Delimiting the Object of Study: Haarmann (1975)

Haarmann's study is presented as part of a larger project aiming at describing the "polyfunctionality" of certain suffixes which may refer at the same time to living beings (*Lebewesen*) and to material objects (*Sachobjekte*). His category of living beings, apart from prototypical human agents also includes animals and plants, while his category of material objects includes instruments and places. These two categories are artificial constructs defined *a priori* for the sake of typological comparability, but have no direct correspondence in the system of derivational categories of the language described, *viz.* Spanish. It is unclear to me what insights a typological analysis could yield that in a first step arbitrarily distorts the facts of the single languages that are going to be compared. I

would like to argue that typological studies of this kind should be based on accurate descriptions of the semantics and productivity of all relevant word-formation patterns. This does not exclude, of course, that in the second phase, where the different languages are compared, some conscious idealisation of the data may be in order, as long as this way of proceeding is carried out under controlled conditions and warranted by the purpose of the study.

Its misguided semantic analysis and neglect of productivity are not the only weak points in Haarmann's analysis. Other problematic aspects include the purely synchronic nature of the description (*cf.* p. 111), which proves insufficient as soon as one begins to ask the crucial question of the origin of this kind of polyfunctionality, or the lumping together of deverbal and denominal formations. Since both aspects will be taken up later on, we may dispense ourselves from dwelling on them here.

3.   Metaphoric or Metonymic Extension: Panagl (1975-78)

According to Panagl (1977: 6–7), there are fundamentally two alternative ways of conceiving of the relation between the agentive and the instrumental reading of suffixes, a lexicalist and a transformationalist one.

From a traditional perspective, the instrumental use is viewed as the result of a meaning extension of the corresponding agentive formation, either through metaphor or through metonymy. Though the latter idea seems quite natural – the lighter, for example, in the frame of lighting a cigarette, is in an obvious relationship of contiguity to the person carrying out the action, while a metaphorical relationship is less straightforward –, Panagl seems to have been the first scholar to take into consideration this possibility. The reason why Panagl nevertheless rejects both of these possibilities is his observation that in many cases German instrumental formations in -*er* are not accompanied by homonymous agentive formations. Now, Panagl argues (*cf.* 1977: 13), if the instrumental use is considered as the result of a semantic extension, one should expect that every instrumental formation or at least an overwhelming majority be accompanied by agentive formations, since these form the bases of the semantic extensions. E. *lighter*, for example, would be a problematic case in point, as there is no established agentive formation *lighter* referring to a person who lights. This correct observation indeed excludes the possibility of explaining all instrumental formations as semantic extensions, metaphoric or metonymic, of corresponding established agentive formations. It does not exclude, however, another interpretation, where the mechanism of semantic extension is used only to explain the *rise* of the instrumental use, while later on instrumental neologisms may be coined in direct analogy to the existing instrumental formations. Under such an interpretation, instrumental uses without corresponding agentive formations would no longer be problematic, since they are attributed to an independent instrumental pattern, only diachronically linked to the agentive one. To be precise, the rise of the instrumental pattern is the result of one or several cases of meaning extension followed by a reinterpretation of the agentive suffix as instrumental: the meaning 'instrument used by the agent designated by V + suffix' (metonymic variant) or 'instrument similar to the agent designated by V + suffix' (metaphoric variant), which are the result of meaning extensions applied to single agentive formations, are reinterpreted as 'instrument used for V-*ing*'.

But there seems yet to be a third possible interpretation of how metaphor or metonymy may transform agentive into instrumental formations. In order to understand how it works, we first have to introduce the concepts of reinterpretation and approximation as they are defined in Rainer (2005). In this study, I claim that semantic change in word-formation, apart from conscious manipulation of the meaning of a pattern, may be due to two fundamentally different mechanisms, *viz.* reinterpretation and what I propose to call *approximation*. Reinterpretation is the mechanism we have described above as an alternative to Panagl's conception, and according to Jaberg (1905) this would be the only mechanism bringing about semantic change in word-formation. Contrary to this position, where all cases of semantic change in word-formation are seen as the result of lexical semantic change in individual complex words followed by reinterpretation, I argue that semantic change in word-formation may also occur at the very moment of the creation of a neologism, without the mediation of lexical semantic change. In such cases, the coiner of a neologism uses a word-formation pattern in an approximate way, hence the term *approximation* I have chosen to refer to this mechanism. The deviance between pattern and neologism is generally bridged by metaphor or metonymy, which in this instance apply to patterns of word-formation and not to single complex words.[1]

The following simple example may serve to illustrate how approximation works. Marchand (1969: 150) notes that the English locative prefix *cis-* has also been used, occasionally, in a temporal sense: "The words *cis-Elisabethan* 1870 and *cis-reformation* (*time*) 1662 transfer the notion of place into that of time. The meaning here is 'belonging to the time after –, subsequent to –'." This semantic change of the prefix *cis-* from its proper spatial meaning to a temporal one cannot be accounted for in terms of lexical semantic change followed by reinterpretation. It was not the case that some individual adjective of the locative type *cisalpine* underwent a semantic change from the realm of space to that of time – no such case is documented nor is it easy to imagine how such a change could come about –, with subsequent irradiation of the new temporal meaning to the prefix *cis-*; the temporal meaning must have arisen at the very moment of the creation of the adjectives *cis-reformation* and *cis-Elisabethan*. The speakers or writers simply used the pattern itself in a metaphoric manner, relying on the pervasive conceptual metaphor TIME-RELATIONS AS SPACE-RELATIONS.

If one is willing to accept the existence of these two fundamental mechanisms of semantic change in word-formation, the question arises with respect to the agent-instrument polysemy whether the extension occurred according to one or the other. The question cannot be answered from a purely synchronic perspective, but as far as diachrony is concerned, the two mechanisms, reinterpretation and approximation, make somewhat different predictions. Reinterpretation predicts the existence of three phases in the passage from agentive to instrumental usage: at stage 1, there are only agentive formations, at stage 2, one or several of these agentive formations acquire a secondary instrumental use through lexical semantic change, and at stage 3 these secondary formations are reinterpreted as directly formed according to an instrumental pattern, which may now be used for the creation of neologisms independently of the existence of corresponding agentive formations. Approximation, on the other hand, does not require the existence of stage 2, i.e., there need not have been at any moment formations with both an agentive and an instrumental reading. Our theory thus leads us

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[1] Similar ideas are also put forward in Panther / Thornburg (2002).

to pay particular attention to the earliest instrumental formations and to look whether this early set is a subset of the agentive formations or whether the two sets are complementary right from the beginning.

Noun in *-dor*	Instr. use	Agent. use
pisador 'pestle' (< *pisar* 'to tread')	1268	1200
foradador 'drill' (< *foradar* 'to drill')	1277	—
asador 'spit' (< *asar* 'to roast')	1295	1450
tajador 'carving board, plate' (< *tajar* 'to cut')	1295	—
rascador 'scraper' (< *rascar* 'to scrape')	1330–43	—
follador 'tub for treading grapes' (< *follar* 'to tread')	1380–85	1400 (1280?)
alimpiador 'cleansing agent' (med.) (< *alimpiar* 'to clean')	1381–1418	—
menador 'cooking spoon' (< *menar* 'to stir')	1385	—
picador 'carving board' (< *picar* 'to chop')	1423	1400
pasador[2] 'arrow' (< *pasar* 'to pass')	1427–28	1280
partidor 'some instr. of women's toilet' (< *partir* 'to divide')	1438	1180
pelador 'depilatory' (< *pelar* 'to depilate')	1438	1400
bastidor 'frame' (< *bastir* 'to construct, to prepare')	1440	—
colador 'strainer' (< *colar* 'to strain')	1450	—
lamedor 'medicine to be licked' (< *lamer* 'to lick')	1450	—
majador 'pestle' (< *majar* 'to crush')	1450	—
aparador 'sideboard' (< *aparar* 'to set (table)')	1477–96	—
tapador 'stopper' (< *tapar* 'to close')	1486–99	—
cerrador 'lock' (< *cerrar* 'to lock')	1492	—
purgador 'screen' (< *purgar* 'to purify')	1493	1494 (adj.)
mosqueador 'fan' (< *mosquear* 'to chase away flies')	1495	—
raedor 'scraper' (< *raer* 'to scrape')	1495	1256

Table 1: The oldest instrumental usages of Spanish *-dor*

The rise of the temporal use of *cis-* described above is a neat instantiation of approximation. Traditional descriptions of the rise of the instrumental use of agentive suffixes, however, are insufficiently detailed and reliable to allow to decide the question of what mechanism was responsible in our case (provided that metaphor and metonymy

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[2] A loan word from Catalan, Provençal or Italian.

have played a role at all; *cf.* below). An investigation of the oldest instrumental usages of Spanish *-dor* carried out with the help of the historical corpus of the Real Academia Española (*CORDE*, see http://www.rae.es) yields the results displayed in table 1. This table contains, in chronological order, all the Medieval examples of the *CORDE* corpus. The last column indicates whether there was, at the moment of the first documented use of the instrumental formation, a corresponding agentive formation. Note, however, that the existence of a corresponding agentive formation is no proof that the instrumental formation was actually formed by a meaning extension on the basis of the corresponding agentive formation, since not all agentive formations qualify as plausible vehicles for a metaphorical or metonymic transfer. *Pisador*, for example, is attested from 1200 onwards in the agentive meaning 'person treading grapes', before the instrumental meaning 'pestle' appears in 1268. Now, may the pestle be viewed as a figurative treader of grapes? It does not strike me as particularly plausible, and this is the most plausible case in our data. The subjective element in assessing the existence of proper agentive vehicles at the moment of the creation of the corresponding instrumental formations makes the decision whether the Spanish data of table 1 better corresponds to reinterpretation or approximation a difficult one. My impression is that it better corresponds to approximation, though the complementary distribution is not perfect.

Independently of whether one thinks that the mechanism at work was reinterpretation or approximation, we still have to decide between metaphor and metonymy. As we have already seen, there can be no doubt that agent and instrument show a relationship of contiguity in the action frame. Nevertheless, I would like here to put forward one general argument against a metonymic interpretation of the relationship between agent and instrument nouns. We start from the observation that not all relations of contiguity that one can establish in the real world serve as the base for metonymies with the same frequency in the languages of the world. Languages seem to privilege certain relationships of contiguity, a subject which, unfortunately, has not, until now, attracted the attention that it deserves. In the absence of a full-blown theory of what constitutes a possible or preferred metonymic relationship in natural language in general or in specific languages, the following argument must be considered of a rather tentative nature, but nevertheless could possibly constitute a clue for deciding between the metaphoric and the metonymic account. The argument is simple and relies on the observation that, apart from morphologically complex agent and instrument nouns, the metonymic relationship between agents and instruments seems to have a clear directionality, the vehicle always being the instrument and the target the agent. With non-derived nouns or nouns not derived by agentive suffixes, in fact, it is quite common to find cases where an agent is designated by the name of the instrument he typically uses, but not *vice versa*. It is common in many languages, for example, to refer to the trumpeter as the trumpet, but not to the trumpet as the trumpeter.[3] Another piece of evidence comes from onomasiological studies of designations for tools, where I have found no trace of agents as a possible diachronic source-domain. According to Gade (1898), for example, of the 40 Latin names of tools contained in Georges' dictionary, no single one is an extension of the name of the worker that used it (*cf.* pp. 9–11), and the same is true of French (*cf.* pp. 75–76). If this generalisation turned out to be valid for

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[3] On the other hand, Panagl (1977: 13), followed on this point by Dressler (1980: 113), notes that he does not know of any case where an agentive pattern of word-formation developed out of an instrumental one. For a possible counter-example from Serbo-Croatian, *cf.* Beard (1990: 119).

languages in general, it would constitute an effective argument against the metonymical account of the origin of the agent-instrument polysemy with suffixes, since semantic extensions are a conceptual phenomenon and so should not distinguish between simple and complex bases.[4]

Summing up what we have said up to now about the issues metaphor *vs.* metonymy and reinterpretation *vs.* approximation, we have to admit that no definitive conclusion has been reached as to which of the four logically possible combinations is or are correct. We have put forward a possible argument against metonymy, and the Spanish data of table 1 appears to favour approximation over reinterpretation. This would point to metaphoric approximation as the most probable candidate. A metaphoric explanation would have the advantage of explaining the directionality of the agent instrument polysemy as a natural consequence of the anthropomorphism so typical of metaphor in general. But the evidence in favour of metaphor was also rather shaky in the Spanish case. This could even mean that in the end we are not dealing with a problem of semantic change at all. As we will see below, there are indeed some arguments that point in this direction. But even though we have not been able to reach conclusive evidence, it seems important to me that we begin to put the right questions about this unexpectedly complex problem, questions that may guide further research.

4.   Synchrony and Diachrony in Typology: Dressler (1980)

While Haarmann (1975) is an exclusively synchronic study, Panagl, a student of Indoeuropean, also dedicated some reflections to diachronic aspects. In Panagl (1977: 4), for example, he notes that the pervasiveness of the agent-instrument polysemy in Indoeuropean could be due either to a Proto-Indoeuropean origin or, alternatively, a "drift" in the Sapirean sense of the term (an interpretation favoured, according to Panagl, by its absence from Hittite).[5] In his endeavour to arrive at a cognitive foundation of the polysemy of agent nouns, Dressler (1980) also transcends the purely synchronic typological approach and includes some remarks on acquisition, aphasia and diachrony. As far as diachrony is concerned, he notes (*cf.* p. 113) that semantic extension in our domain seems to have been strictly directional: Agent patterns, according to him, may turn into Instrumental or Locative ones, and Instrumental patterns into Locative ones, but not *vice versa*. It is not made clear, however, how exactly such diachronic generalisations – provided that they turn out to be correct – or the observations about acquisition and aphasia might contribute to our understanding of the nature of the phenomenon under consideration. The "cognitive embedding" (*kognitive Verankerung*, p. 114) of the process is left for future research.[6]

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[4] For a recent defence of the metonymic nature of the agent-instrument relationship, *cf.* Panther / Thornburg (2002: 292, 298). In fact, they defend the Salomonic position that a metaphoric and a metonymic account are not mutually exclusive.

[5] In Tichy's (1995) study of Vedic agent nouns in *-tar-*, no mention is made of an instrumental extension either.

[6] In Dressler (1986: 527), a relation is established between the unidirectionality of our polysemy and the animacy hierarchy: "This agent hierarchy seems to correspond to the animacy hierarchy [...]. Most central events of human life prototypically have a human agent; next come animal agents [...]; then plants which produce fruit [...]; then impersonal agents [...]; then instruments; and finally local conditions of events or states [...]. In other words, the conceptual basis of the agent hierarchy seems to lie in the prototypical human interpretation of events."

1.	Deverbal agentive and instrumental formations:	
1.1.	Agent – Predicate	E. *cutt-er*
1.2.	Instrument – Predicate:	E. *cutt-er*
1.3.	Ag. / Instr. – Predicate – Object	E. *dress-mak-er*, *salt-shak-er*
2.	Denominal formations:	
2.1.	Ag. / Instr. (makes/typically deals with) Object	E. *garden-er*
2.2.	Agent (comes / is from) Object	E. *island-er*, *London-er*
2.3.	Agent (is typical for) Predicative Adjective[7]	E. *foreign-er*
3.	Predicate – Place:	
3.1.	Recipients (instrumental reading possible)	L. *mulc-trum* 'pail' (deverbal) F. *salad-ier* 'salad bowl' (denominal)
3.2.	Locative meaning developed from instrumental one	G. *Ordn-er* 'file' (deverbal) Fr. *encr-ier* 'inkpot' (denominal)
3.3.	Truly locative	Fr. *dort-oir* 'bedroom' (deverbal) Fr. *guêp-ier* 'wasp's nest' (denominal)

Table 2: The polysemy of agent suffixes according to Dressler (1980)

In the typological part of his study, Dressler, like Haarmann, includes both deverbal and denominal formations,[8] which he classifies as subsets of the semantic formula Predicate – Agent – Instrument – Locative – Object as illustrated in table 2. I would like to argue now that such a classification, similar to the one presented by Haarmann, is not very suitable to gain deeper insights into the nature of the polysemy of agent nouns. A strictly diachronic approach, it seems to me, will yield better results, since it shows that what looks similar from a purely synchronic perspective often corresponds to entirely different phenomena when viewed from a diachronic one. Once again, I will use Romance data to illustrate this point.

The origin and history of the instrumental extension of Romance deverbal agent nouns is still not definitively settled. As we saw in the introduction, the most popular view attributes it to metaphor. While this venerable view may be open for discussion,

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[7] Conceived of as a kind of Object of the copulative verb.

[8] In Dressler (1986: 527) the following explanation is given for the choice of the category of the base of agent nouns: "Since events are prototypically symbolized by verbs, it must come as no surprise that verbs are the preferred bases of agent nouns. Nouns are preferred when the conceptually 'underlying' verbs are semantically underspecified, or not distinct enough". A recent case for a unified treatment of English deverbal and denominal formations in *-er* is Panther / Thornburg (2002: 284–285). This is too complex an issue to be addressed here. One problem for a unified treatment, however, is already pointed out by Panther and Thornburg themselves (*cf.* pp. 312–313): deverbal and denominal suffixes do not seem to behave alike with respect to semantic extension (for example, denominal agentive *-ist* does not show any semantic extensions).

there can be no doubt that some cases of polysemy of deverbal formations at least are attributable to other reasons.

Already in Darmesteter (1877), the first comprehensive treatment of French word-formation, nineteenth-century instrumental nouns in *-eur* are considered as "tirés d'adjectifs", i.e., derived from adjectives (*cf.* pp. 47–49). And Darmesteter was certainly right in considering many names of tools and machines coined in the 19th century as the result of the ellipsis of the head noun in noun phrases of the form *appareil* + adjective in *-eur* or *machine* + adjective in *-euse*. Since at that time, French had already an established nominal instrumental pattern in *-eur*, it is often difficult in single instances to decide whether we have to do with the result of ellipsis or with a direct nominal formation, overall however there can be no doubt that both means were productively used (*cf.* also Spence 1990: 32–33). Apart from Darmesteter's intuition we can also rely on the testimony of nineteenth-century texts, where often the noun phrase is documented before the short form, or side by side. This elliptical mode of forming instrument nouns in French seems to have arisen or at least gained momentum in the 19th century. Pharies (2002: 170) has recently proposed to extend this elliptical explanation to the rise, in the Middle Ages, of the instrumental and locative uses of the corresponding Spanish suffix *-dor*. However, as I have shown in Rainer (2004a), such a move is unwarranted, since we do not find any parallel syntagmas in Spanish up to the 19th century, when this mode of formation was probably imported from France along with a large number of names of tools and machines. Ellipsis is obviously *a priori* restricted to languages where, like in Romance, agent nouns in *-eur*, *-dor*, etc. have parallel adjectival formations, i.e., where 'cutter' and 'cutting' (adjective) are formed by one and the same suffix.[9]

Another source of instrumental nouns in Romance which has nothing to do with meaning extension is homonymisation. In Provençal (*cf.* Adams 1913: 54) and in Catalan[10] (*cf.* Moll 1952: § 429), as well as in some other areas, among them Romania (*cf.* Graur 1929) and some Italian dialects (*cf.* Rainer 2004b), as a consequence of phonetic change the result of the Latin instrumental suffix *-torium* ended up identical with the one of the Latin agentive suffix *-torem*. L. *operatorium* 'workshop' (< *operari* 'to work'), for example, became *obrador* in Provençal and in Catalan, with a suffix *-dor* identical to the one we find in agent nouns. The rise of the agent-instrument and agent-place "polysemy" is therefore due to pure accident in those languages. If we had no historical records of the Romance languages, the temptation would no doubt be great to give a semantic or "cognitive" interpretation of the formal identity of the agentive, instrumental and locative suffix.

The agent-place "polysemy", however, someone might object, is also found in Spanish, where L. *-torium* and *-torem* did not become homophonous, but remained distinct as, respectively, *-dero* and *-dor*. But, as Malkiel (1988: 238) has shown convincingly, the first Spanish locative formations of the type *comedor* 'dining room' were borrowings from Provençal (or Catalan), where the locative use, as we have just seen, was due to phonetic change. The same hypothesis, by the way, had already been taken into consideration by Meyer-Lübke (1921: § 66) with respect to some surprising Old French instrumental and locative formations in *-eour*, the regular outcome of L. *-torem*, like *tailleour* 'carving board, plate' (← *tailler* 'to cut') or *ovreour* 'workshop'

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[9] Adjectival usage of *-tor* was already common in Late Latin (*cf.* Fruyt 1990).

[10] In the light of this fact, the purely semantic interpretation of the origin and development of Catalan nouns in *-dor* in Grossmann (1998: 390) is surprising.

(< *ovrer* 'to work'), surprising because the French instrumental or locative suffix to be expected would have been *-oir*, the outcome of L. *-torium*. In these cases, too, no semantic or "cognitive" explanations are needed. Borrowing is a sufficient explanation.

We have thus identified, for Romance, three uncontroversial origins of instrumental or locative uses of deverbal agentive suffixes which have nothing to do with semantics or "cognition", namely ellipsis, homonymisation and borrowing. I am firmly convinced that these examples are a strong caveat against overly rash semantic or "cognitive" speculations on the basis of purely synchronic data. The fact that meaning M^1 and M^2 of a suffix may plausibly be viewed as polysemous by an observer on purely synchronic grounds does not entail that we are really dealing with meaning extension from a diachronic perspective. The lesson to be drawn from this fact, it would seem to me, is that it is much more fruitful to study paths of semantic change with sound diachronic method than to extrapolate them from purely synchronic data.[11] This is not meant to deny any usefulness to typological studies in this domain, but one has to be extremely careful about their interpretation. The best thing to do would be to use as the basis of typological studies well-established diachronic paths of change rather than synchronic polysemies.

Many readers may accept this conclusion in principle, but will object that one should not overestimate the Romance evidence adduced in the face of the many cases of polysemous agent nouns documented for other languages. This is an argument that may be right, but for the moment being we simply cannot say how many of the cases adduced in the literature – which, after all, are not so great in number as the universalist rhetorics might make one believe – are genuine cases of semantic extension and how many are due to ellipsis, homonymisation and borrowing. We still don't have even an approximate idea about how frequent our polysemy really is in the languages of the world, since all the typological studies published up to now have a very preliminary character and work with relatively few illustrative examples, mostly taken from Indo-European and supplemented with scattered exotisms that serve to suggest universality.

Things get even worse when we turn to denominal formations. The pronounced polysemy of denominal nouns like those in *-ier*, as is well-known (cf. Roché in press), is due to the fact that the etymon, Lat. *-ariu*, was a suffix forming relational adjectives that ended up as a nominal suffix after the ellipsis of the head nouns. Here again, it would be misleading to use just the synchronic data for speculations about the semantic or "cognitive" foundation of this agent-inhabitant / place / tree / set "polysemy".

5.   Extension Schemes: Booij (1986)

Booij (1986) proposed to account for the polysemy of agent nouns with what he called an extension scheme, which in our case takes the form Personal Agent > Impersonal Agent > Instrument. All three of these meanings, for example, are present in Dutch *zender* 'sender', which may refer to a person who sends (Personal Agent), a radio/tv station (Impersonal Agent), or a transmitter (Instrument). "The category Impersonal Agent", according to Booij, "is not the same as Instrument, but an intermediate and mediating category" (p. 509). It roughly corresponds to automatic devices (*cf.* p. 510).

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[11] Jurafsky (1996), one of the most detailed studies of universals of semantic change, is not exempt of this extrapolatory tendency.

The description of Impersonal Agent as an intermediate or mediating category somewhat closer to Agent than to Instrument seems intuitively appropriate from a synchronic perspective, since an impersonal agent shares the feature 'autonomous movement' with a human agent, and the feature 'inanimate' with an instrument. If Booij's scheme, however, were meant to describe how the instrumental use of a pattern may arise from an agentive one in diachrony – which is nowhere explicitly claimed in Booij's article, but seems to be an invited inference –, this prediction would be clearly wrong. In my diachronic study of the passage from agent to instrument in Spanish (*cf.* Rainer 2004a), for example, I have found that up to the 19th century, that is during the first 500 years of the suffix's productivity, one only finds Instruments in Booij's restricted sense, with the possible exception of *despertador* 'alarm clock', already attested in the 16th century, while Impersonal Agents are only attested after the Industrial Revolution, which of course is only to be expected, since automatic devices are typical products of this period. At least for the pre-industrial age, thus, one would have to postulate an estension scheme Agent > Instrument, without intermediate category.

Another prediction of the extension scheme, according to Booij, is that the agentive interpretation of Dutch nouns in *-er* "is always possible, although it may not be an established use of a certain noun" (p. 510). It is not clear whether, in the light of the admission of possible but not attested agent nouns, this prediction has any empirical content. A fair interpretation, probably, would be that there should not be too many missing agent nouns beside attested instrument nouns in *-er* or equivalent suffixes in other languages. Now, at least in present-day Spanish, most of the instrumental formations in *-dor* are not accompanied by a corresponding agentive formation. Of the 48 nouns in *-dor* contained under the letter *D* in the Spanish dictionary I have at hand, 24 are exclusively agentive, 21 exclusively instrumental, while only three have both meanings. As one will recall, the same point has also been made with respect to German by Panagl, who based his rejection of a semantic extension account of German *-er* precisely on this tendency towards a complementary distribution of agent and instrument nouns.

Another prediction is formulated as follows by Booij: "if [the extension scheme] 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" (p. 511) Both predictions, according to Booij, "are confirmed by the facts" (p. 511). The confirming evidence presented consists essentially in a short reference to the typological data presented by Panagl (1978) and Dressler (1980). Booij is aware of the fact that there are languages such as Finnish or Latin which have agentive patterns without instrumental extensions, but this is said to be a consequence of the blocking effect of rival instrumental patterns. Support for this argument could come from Spence's (1990: 35) hypothesis that the instrumental extension of *-eur* in French was the consequence of the loss of productivity of the instrumental suffixes *-oir* and *-oire*, but more research is needed in order to gain certainty about the history of French instrumental suffixation. On the other hand Beard (1990: 118) notes that in Serbo-Croatian the existence of a productive instrumental suffix does not block the instrumental use of the agent suffix. The most crucial counter-evidence would seem to consist of languages without an instrumental pattern, but a productive and exclusively agentive pattern. As we have seen above, the

descriptive coverage of the existing typological literature is rather restricted, for the moment being, so that I will not venture a definitive assessment of Booij's prediction here. Beard (1990) has presented what he considers to be falsifying instances with respect to Booij's hypothesis, but more evidence is needed to arrive at a definitive settlement of this question.

6.   Prototype Reanalysis: Ryder (1991)

One problem that has been left undecided by Booij, the exact nature of the passage from the agentive to the instrumental meaning, has been tackled some years later by Ryder (1991), a study couched in the framework of Californian-style cognitive linguistics. Her approach is based on the three basic notions *semantic case*, *event structure* and *prototype reanalysis*. Semantic cases like Agent, etc. are said to have a prototypical organisation (*cf.* p. 300). Complex events may be broken down into smaller units, the exact organisation depending very much on the point of view of the speaker. One may view, for example, the breaking of a glass with a hammer as one holistic event or divide it into smaller sub-events such as the act of seizing the hammer, the act of throwing the hammer and the splintering of the glass. A series of such minimal events is called *event chain*. With the help of this conceptual framework, the nature of the semantic extensions of agent nouns is interpreted as "the result of shifts in the construal of the defining episode" (p. 303): [12]

> As the agent and instrument become more separated from each other in time, and the instrument's action becomes increasingly independent of the agent, the agent's action may be construed as outside the episode, leaving the instrument as the most agent-like participant remaining.[13] […] It is the shift of the agent to outside the boundaries of the episode that motivates the extension of agentive -er forms to include *instrument Er's*. (pp. 303–304)

Ryder's account resembles Booij's extension scheme – in my diachronic interpretation – in predicting that the instrumental use occurred when instruments became more and more autonomous, automatic, Impersonal Agents in Booij's terminology. And it fails for the same reasons that were advanced against Booij's hypothesis. With the possible exception of *clipper*, all nouns from the 15th to the 17th century mentioned by Ryder in support of her account (*viz. lighter, poker, scraper, snuffer, borer, knocker, grinder*, and *toaster* 'toasting fork'), refer to instruments that may be characterised as simple tools and do not show any autonomy or automaticity. If Ryder's list of early instrument nouns proves anything, this is the extent to which perception may be distorted by theoretical expectations.

Ryder does not tell us how she arrived at her list. What is clear is that it is not an exhaustive enumeration of the earliest English instrument nouns. According to Marchand (1969: 275), "the oldest coinage appears to be *slipper* 1478". Old English deverbal nouns in *-er* "are all agent nouns" (p. 275). In his detailed 1971 study of the Old English suffix *-er(e)*, Kastovsky, a pupil of Marchand's, arrives at the conclusion

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[12] Note that in Ryder's approach the passage from agent to instrument does not involve metaphor, where a source domain is consciously projected on to a target domain.
[13] Essentially the same explanation had already been proposed by Panagl (1975: 239).

that his teacher's statement is slightly too apodictic (p. 295). Kastovsky's Old English data (*cf.* pp. 294–295), in fact, contains one uncontroversially instrumental example, namely *pūnere* 'pestle' (< *pūnian* 'to pound'), which occurs in a gloss (unfortunately we are not told of what Latin word). To this example one might add *scēawere* 'mirror' (← *scēawian* 'to look at'), which translates Latin *speculum*.[14] The third example, *word-samnere* 'catalogue, collection of words' (← *samnian* 'to collect') has a meaning somewhere between instrumental and locative. A more neatly locative meaning is present in the fourth of Kastovsky's examples, namely *scēawere* 'watch-tower'. Dalton-Puffer, herself a pupil of Kastovsky's, has returned to the problem in her 1996 study of the French influence on Middle English Morphology, where she comes to the conclusion that "there is only *one* word in the data[15] that really answers the description of Modern English *cooker*, *opener*, namely *calculer* (ME3)[16] 'computing, calculating device'" (p. 139). Interestingly, in the *OED* I have accidentally come across a semantically similar Middle English instrument noun documented somewhat earlier, in 1310, namely *counter*, defined as 'a round piece of metal, ivory, or other material, formerly used in performing arithmetical operations'.

Now, do these six non-agentive formations attested prior to Marchands *slipper* and Ryder's *lighter*, which, as expected, do not designate autonomous, automatic devices either, but traditional tools or places, allow us to infer how the passage from agent to instrument might have occurred in English? Personally, I can't see any obvious hint in this data, which I can only urge Anglicists to complete. What catches my attention, however, is that some words have interesting Romance or Latin parallels. *Scēawere* 'mirror' corresponds exactly to Old French *mirreur* 'mirror' (← *mirer* 'to look at'), first attested in 1180 according to *FEW* VI 149a (the Modern form *miroir* is first attested in 1260), which had already ousted the type SPECULUM in preliterary French (*FEW* VI 155b). The meaning 'watch-tower' does not seem to have existed in Old and Middle French, but is attested for Spanish *mirador* (← *mirar* 'to look at'), which must be a loan translation from Catalan or Provençal, as early as 1250 in *CORDE* (*cf.* Rainer 2004a). *Counter* is paralleled by French *comptoer* 'jeton pour compter', first attested in 1359 (*FEW* II 992b). Though the French word is slightly posterior to the English one, it seems quite obvious that French must have been the donor language. *Calculater* has no Middle French parallel, but could simply be an analogical formation on the model of *counter*. These parallelisms, I believe, might warrant a closer examination of the possible influence of French in the development of the instrumental and locative use of English *-er*. Foreign influence, finally, also seems possible in the rise of *word-samnere*, whose ending may have been influenced by the denominal collective *-er* loan-translated from Latin *-arium*, as in Old English *antefnere* 'antiphoner' (Kastovksy 1971: 295, fn. 23), a clear loan-translation of Medieval Latin *antiphonarium*. Though *word-samnere* is a deverbal formation, it fits perfectly into this semantic field. It could thus be worthwhile for Anglicists to pursue the hypothesis that the rise of non-agentive uses of *-er* was due – at least partially – to Latin and Romance influence.

The possible influence of loan-translations in the rise of non-agentive meanings of agent nouns should also be analysed with respect to other European languages. This

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[14] This is also the only instrumental formation Zbierska-Sawala (1993: 43) has found in her Early Middle English corpus.

[15] *Sc.* the Helsinki corpus.

[16] *ME3* refers to the Middle English period going from 1350 to 1420.

might help to explain at least part of a startling conspiracy in Medieval Europe: while Latin and, as it seems, Proto-Germanic agent nouns seem to have lacked non-agentive uses, in the Middle Ages *all* European languages seem to acquire such readings within several centuries. This could, of course, be an extreme case of polygenesis, since semantic extension is a universally available pattern, but the spatio-temporal coincidence makes it too strange for me to swallow this explanation without first checking the alternative hypothesis of inter-European loan-translation. Both explanations, of course, are not mutually exclusive, but may have reinforced each other. If this were the case, historical linguists would nevertheless have the task of establishing the specific mixture of both factors for any individual language.

My insistence on non-semantic or non-"cognitive" interpretations of the fragmentation process of agent nouns should not be misinterpreted as a general, *a priori* rejection of their importance. It is quite obvious that they do play an important role, in the derivational categories dealt with here (Agent, Instrument, Place), but also the other categories that are sometimes found with agent nouns, such as Action, Object, etc.[17] The problem is rather that their obvious importance has obscured most researchers' view of the other factors – ellipsis, homonymisation, borrowing, loan-translation – which seem to play an equally important role, at least in Romance. A fully satisfactory account of the polysemy of agent nouns cannot escape coping with this complexity, and only such detailed accounts will form a reliable basis for typological and semantic studies.

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[17] Interestingly, these further categories are far more common in Germanic than in Romance.

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