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## On the viability of cognitive morphology for explaining language change\*

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### 1. Introduction

The dichotomy nature vs. nurture has been defined as “[t]he fundamental question of the developmental sciences” (MacNeilage 1997: 302). Nature has to do with the cognitively-grounded endowment specific of human beings, whereas nurture can be seen as the result of a learning process, which only indirectly reflects cognitively-grounded properties of the language faculty.

The diachronic dimension provides a bridge between nature and nurture, in the sense that language change results, at least partially, from the action of selective cognitive abilities associated with the single components (or dimensions) of the language faculty. On the other hand, these selective cognitive abilities may give rise to conflicts among the different dimensions of the language faculty, in that a certain language change, locally resulting from a natural, i.e., cognitively well-founded, process, may produce unnatural structures or configurations along other dimensions, which require nurture. In particular, this paper will raise the question whether a phenomenon which is massively encountered in natural languages such as homonymy may be traced back to a large extent to well-defined “natural” patterns of diachronic evolution based on cognitively-grounded processes.

On the one hand, this is trivially the case: it is fairly well known that homonymy results from natural sound change. The fact that *hear* and *here* turned out to be homophonous is due to independent sound changes, which are *ipso facto* motivated by the cognitively-founded articulatory and acoustic apparatus of human beings. Nevertheless, the lexical association arising as a consequence of homonymy is completely opaque to the speaker. This does not exclude that secondary motivation may arise due to folk etymology, as in the case of *weed* from Old English *wēod* ‘grass’ and *weeds*, only current in the expression *window’s weeds*, from OE *wæd* ‘cloth’ (cf. Bloomfield 1933: 436). As commented by Ullmann (1957: 128), it is per-

fectly natural that the speaker is tempted to establish a connection in such a case, transforming the homonymy into polysemy.

On the other hand, this is trivially not the case: borrowing may create homonymic pairs, which are not motivated in any meaningful way by the cognitive endowment, as in the case of *beaver*, which goes back either to OE *beofor* ‘castor’ or to Old French *bavière* ‘gag’, a derivative of *bave* ‘dribble’ (cf. Ullmann 1957: 128). Again, a secondary motivation due to folk etymology is lurking here.

Besides these trivial cases, the hypothesis that is at stake is that cognitively guided semantic processes of meaning extension such as metaphor and metonymy are of paramount importance in reconstructing semantic change. Croft and Cruse (2004) take a rather optimistic stance on the question, considerably simplifying the issue by teasing the diachronic and the synchronic perspective sharply apart. In a diachronic perspective, “homonymic units are derived from distinct lexical sources, and their orthographical/phonological identity is due either to the loss of an original distinction due to language change, or to borrowing” (Croft and Cruse 2004: 111). On the other hand, “polysemic units are derived from the same lexical source, being the result of processes of extension such as metaphor and metonymy” (Croft and Cruse 2004: 111). Given these premises, the following claim is made:

“The diachronic distinction between homonymy and polysemy is a yes/no matter, and is a question of historical fact, resolvable in principle, if not always in practice. The synchronic distinction is less firmly based, and is a matter of degree. The question is whether there is a felt semantic relationship between two interpretations of a word or not. (Croft and Cruse 2004: 111).

Relying on two different case studies, this chapter shows that far from being only a yes/no matter, the diachronic dimension offers much more troubles than what Croft and Cruse want us to believe. On the one hand, an apparent case of nurture will be presented, which is nicely explained as a case for nature when the diachronic dimension is considered. On the other hand, an apparent case of nature which has received general agreement upon a supposed “felt semantic relationship” reveals unexpected patterns of nurture, if diachrony is seriously considered. This amounts to say that if it may be true that a diachronic distinction between homonymy and polysemy can in principle always be made, its bearing on the synchronic distinction is far less clear. On the one hand, reconstructed patterns of meaning extension may shape the onomasiological domain of certain mor-

phemes (what is called layering in grammaticalization studies, cf. Hopper and Traugott 2003: 49), leading to uncertainty about how speakers organize the semantic space of lexical entries. On the other hand, diachronic developments may collide with synchronic assumptions about meaning extension, providing alternative interpretations in neat contrast with general views of the cognitive processes synchronically applied by speakers. This makes the diachronic perspective unescapable for a far-reaching analysis of language as a cognitively founded faculty of human beings as demonstrated in the following two case studies on verbal and suffixal homonymy.

## 2. The passive auxiliary *ginn* in Luxembourgish

In the Luxembourgish dialect,<sup>1</sup> a rare example of surface homonymy occurs, in that the verb for GIVE is homonymic with the auxiliary used to form the passive:<sup>2</sup>

- (1) a. *ech gi gesinn*  
 I give seen  
 'I am seen'
- b. *ech ginn der e Buch*  
 I give you:DAT a book  
 'I give you a book'

Notice that the two homonymic verbs display different morpholexical properties, because they select different auxiliaries, resp. BE and HAVE, when occurring in the perfect construction:

- (2) a. *ech si gesinn ginn*  
 I am seen given  
 'I have been seen'
- b. *ech hunn der eppes ginn*  
 I have you:DAT something given  
 'I have given you something'

Finally, the same verb is used as an inchoative copula, and as an auxiliary for the subjunctive form:

(3) a. *ech gi krank*  
 I give ill  
 'I become ill'

b. *wann ech Zäit hätt, géif ech bleiwen*  
 if I time had, give:SUBJ I stay  
 'If I had time, I would stay'

In all these usages, the Luxembourgish verb for GIVE corresponds to the Modern Standard German (= MSG) verb *werden* 'become':

(4) a. *Ich werde gesehen*  
 I become seen  
 'I am seen'

b. *Ich werde krank*  
 I become ill  
 'I become ill'

c. *Wenn ich Zeit hätte, würde ich bleiben*  
 if I time had, become:SUBJ I stay  
 'If I had time, I would stay'

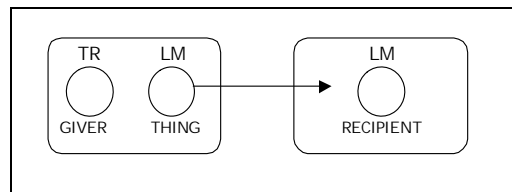
Except for the further usage of MSG *werden* as an auxiliary for the future periphrasis, which is not attested in Luxembourgish,<sup>3</sup> we can establish a synchronic equivalence between Luxembourgish *ginn* and MSG *werden*. Furthermore, notice that the homonymy between the passive auxiliary and the verb for GIVE is very peculiar, given that a similar pattern is only attested in some Chinese dialect (cf. Haspelmath 1990).<sup>4</sup> Is this homonymy a case for nurture or nature? Clearly, from a synchronic point of view, the homonymy is particularly astonishing, if the selectional properties of the predicate for GIVE are considered. The latter is specified for an agentive subject and a patientive object, as opposed to the typical properties of a passive auxiliary, usually incompatible with an agentive subject. The contrast with its equivalent MSG verb *werden* is evident: for the latter, a consistent spectrum of polysemy may be reasonably assumed, in which the so-called 'fientive' verb (cf. Haspelmath 1990) has been the starting point for a grammaticalization process to start, crucially centered on the resultant state attributed by the past participle to a patientive subject, as in *ich werde genesen* 'I am cured' which parallels *ich werde krank* 'I become ill'. On

the contrary, the hypothesis of a polysemic analysis looks quite improbable in the Luxembourgish case since no features appear to have been shared. Even worse, the fientive value displayed by the Luxembourgish *ginn* appears particularly difficult to combine with the basic meaning of the verb. In the next sections, we will see that far from being an unexplainable quirky characteristic of this small dialectal area a quite natural pattern of meaning extension lies behind the grammaticalization of GIVE as a passive auxiliary.

### 2.1. The cognitive representation of GIVE

A general cognitive representation of a sentence like *Mary gave John a book* is given in the following picture, in which there is the profiling of the movement caused by a trajector, the giver, on a landmark, a generic thing, which goes out of her domain and enters into the domain of the second landmark, the recipient (cf. Newman 1996: 47):

(5)



One of the possible extensions of this image-schema involves the backgrounding of the recipient, as in the following MSG examples (but similar extensions occur in a wide spectrum of languages as well, cf. Newman 1996 for a broader picture):

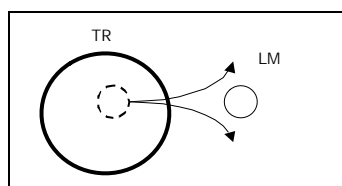
- (6)
- a. *Der Baum gab viele Früchte.*  
'The tree gave many fruits'
  - b. *Der Ofen gibt Wärme.*  
'lit.: the stove gives heat'
  - c. *Der Geiger gibt ein Konzert.*  
'The violinist gives a concert'

As commented by Newman (1996: 144):

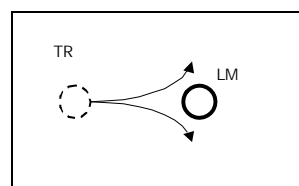
“[t]he THING may be viewed ... as emerging out of some physical region, and it is this way of viewing the movement of the THING which motivates a large group of extensions involving emergence and manifestation of entities”.

Besides the backgrounding of the recipient, this set of examples is characterized by a growing degree of abstractness for the things involved, from the concrete entities of (6a) to the event of (6c). A further step in this abstraction process implies the backgrounding of the causing entity as can be gathered from the comparison of the following two image-schemas:

(7) a.



b.



The meaning extension portrayed in (7b) shows that these abstracted senses of “GIVE verbs tend to occur in constructions which lack the typical agent-patient contrast” (Newman 1996: 156). This, in turn, is responsible for the occurrence of the existential construction in MSG, as recognized at least since Grimm (1837: 266):

- (8) a. *Das Wetter ist sehr günstig: das - es gibt gute Ernte.*  
 ‘The weather is very favourable: this - it gives a good harvest’
- b. *Es gibt viele Kinder in der Schule.*  
 ‘There are many children in the school’
- c. *Es gibt einen Gott.*  
 ‘There is one God’

This construction seems to have been gaining more and more terrain since the sixteenth century, especially in the dialectal area along the Rhine. The first writer to make a consistent use of the existential construction was Hans Fischart, who was active in Strasbourg in the second half of the sixteenth century. This is obviously not coincidental. We will see that this historical fact provides the key for interpreting the actual usage attested in Luxembourg.

2.2. The cognitive history of the fientive extension of GIVE

It is the merit of Newman (1998) to have pointed out the role played by discourse implicatures in giving rise to slight meaning extensions, which finally led to the crystallization of the existential usage of the verb for GIVE in this dialectal area, as well as in the rest of the German-speaking world.<sup>5</sup> A parallel number of similar extensions, driven by discourse implicatures, can also be assumed for the fientive extension which constitutes the bridge for GIVE to be further grammaticalized as a passive auxiliary. For the development of the existential construction, Newman (1998) studied Hans Fischart's text *Geschichtklitterung*, which is quite a free adaptation of Rabelais' *Gargantua*. In his analysis, he gives the following examples:

- (9) a. *wann nur alte Weiber unnd die Hund dran seychten, so gebs guten Burgundischen Saltpeter (Gesch. 125, 37–38)*  
 'having just old women and dogs urinate on it would produce good Burgundy saltpetre'
- b. *verzicht mir, daß ich euch den Säuen vergleich, sie geben dannoch guten Speck (Gesch. 56, 30–31)*  
 "pardon me that I compare you to sows, but they do produce good bacon"

The first example is an instance of the existential construction, in which the premise contained in the subordinate clause allows a certain entity to come about. In the second example, there is also the coming about of a certain entity; in this case, however, the causee is seen as a natural expansion of properties contained in the trajector. In other words, the latter is in a metonymic relation with the causee. The premise for the emergence of a new entity or condition can also be contained in the discourse context both for the existential and the fientive meaning, as shown by the following examples from Fischart and from a text of the sixteenth century reported in DWB, s.v. *geben*:

- (10) *Geltet ihr Fronecken, welche nit gern spinnen, die geben gute Wirtin? (Gesch. 135, 29f.)*  
 'Isn't it so that your girls who don't like to spin will make (lit. give) good innkeepers/innkeepers' wives?'



- (11) *spannen sie tücher oben in auf die dächer, dasz sie in der mitte herab hangen und einen sack geben*  
 ‘They hang out the sheets above on the roofs, so that they hang in the middle and form (lit. give) a sack’

The basic difference between the two outcomes consists in the back-grounding of the trajector in the existential meaning, and in a metonymic relation between trajector and landmark in the fientive meaning, in that “a kind of movement of a new entity out of a physical region associated with the producing entity” is involved (cf. Newman 1998: 317). The identity between the “producing entity” and its natural expansion, as in the case of the sow and the bacon above, is the crucial step which changed a typical agentive verb like GIVE into a fientive predicate.<sup>6</sup>

In the following table the four steps are summarized which, on the basis of discourse implicatures, led to the two different outcomes, respectively the existential and the fientive meaning:

Table 1. Discourse implicatures leading to the existential and to the fientive meaning extension of the verb GIVE.

A	<i>X gibt Y</i>	There is a causal relationship between some entity X and the emergence of another entity Y.	
		$\hat{i}$	$\hat{i}$
B	<i>Es gibt Y</i>	There is some entity Y which will exist subsequent to the event described by the antecedent clause.	<i>X gibt Y</i> There is a causal relationship between some entity X and the emergence of another entity Y, which represents a natural expansion of X.
		$\hat{e}$	$\hat{e}$
C	<i>Es gibt Y</i>	There is some entity Y which will exist subsequent to the prior events.	<i>X gibt Y<sub>x</sub></i> A new entity / property Y <sub>x</sub> comes about, which is conceived as the development of (natural) properties of X.
		$\hat{e}$	$\hat{e}$
D	<i>Es gibt Y</i>	Y exists.	<i>X gibt Y<sub>x</sub></i> X becomes Y <sub>x</sub> .

Once that the fientive meaning came about, the conditions were met for the verb for GIVE to cross the path of the other fientive verb *werden* and to share its destiny, namely of being grammaticalized as an auxiliary in the passive construction as well as in the other auxiliary functions like the subjunctive periphrasis. All of this brings us back to the initial question of the distinction between polysemy and homonymy. Given that the diachronic process leading to the grammaticalization of GIVE as a passive auxiliary looks perfectly natural, how is the synchronic relation between the two different usages of *ginn* to be conceived of in Luxembourgish? I am not sure whether a pure homonymic solution is completely satisfactory, because the fientive meaning is definitely vital and allows the speakers to reconstruct a direct relation between fientive and passive usages like those mentioned above of *ich werde krank* and *ich werde genesen*. Furthermore, the table illustrates how the linkage between the basic meaning of GIVE and its fientive extension can be reconstructed in the universe of discourse.

In this light, the clear-cut dichotomy between synchrony and diachrony postulated by Croft and Cruse (2004) is much less safe than what they claim. If it is true that this can be considered a case of diachronic polysemy, its synchronic treatment remains partially obscure and in need of further research on how the speakers of Luxembourgish perceive the lexical relation between the two verbal usages.<sup>7</sup>

### 3. Polysemy and homonymy in agent and instrument nouns

The other case-study at issue represents in a certain way the mirror-image of what has been discussed in the previous sections. In fact, the polysemy of agent and instrument is given for granted in many approaches to the semantics of word formation processes.<sup>8</sup> To mention just a couple of approaches couched in different theoretical frameworks, Booij (1986) attributes the range of meanings displayed by the Dutch suffix *-er*, as shown below in (12), to a universal, cognitively-founded hierarchy, which, from the basic meaning Personal Agent, leads to the other meaning extensions:

- (12)
- |           |                                |                                   |
|-----------|--------------------------------|-----------------------------------|
| a. PERSON | <i>spel-er</i> ‘player’        | < <i>spel-en</i> ‘to play’        |
| b. OBJECT | <i>open-er</i> ‘opener’        | < <i>open-en</i> ‘to open’        |
| c. PLACE  | <i>bijsluit-er</i> ‘enclosure’ | < <i>bijsluit-en</i> ‘to enclose’ |
| d. EVENT  | <i>treff-er</i> ‘hit’, ‘goal’  | < <i>treff-en</i> ‘to hit’        |

Personal Agent > Impersonal Agent > Instrument (> Place / Event)

The hierarchy is claimed to be supported by a universal cognitive tendency which is “presumably language-independent”, so that “we expect the same polysemy to exist for agent nouns in other languages” (Booij 1986: 511). Thus, in his approach based on the autonomy of language from cognition, Booij (1986: 512) emphasizes that the categories responsible for the meaning extensions are “conceptual categories, not linguistic categories”. Panther and Thornburg (2002: 285) defend an opposite view, which identifies in “two high-level conceptual metaphors, personification and reification” as well as in specific “conceptual metaphors and metonymies” the “account for the polysemy of the *-er* suffix” in English. The careful investigation of the different possible meanings displayed by the English *-er* formations is summarized in the following figure, which is centered around the prototypical agent meaning, strictly connected with the instrumental extension:

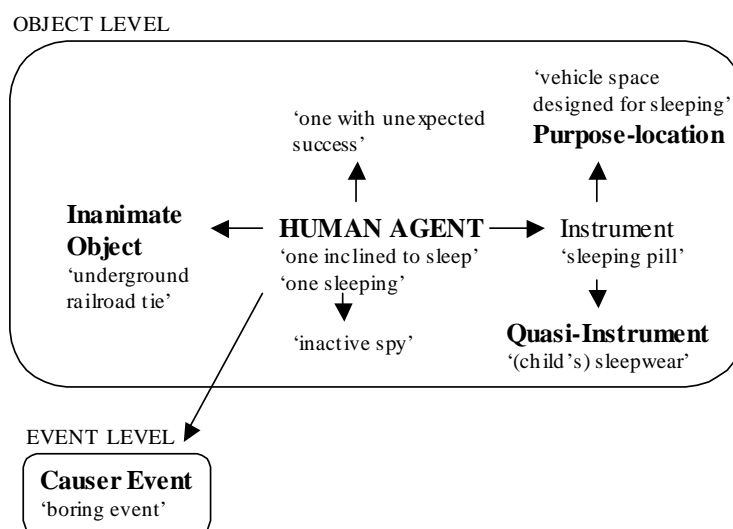


Figure 1. Polysemy of *sleep* (cf. Panther and Thornburg 2002: 310)

From this viewpoint, and abstracting away from the different views on the autonomy of language from cognition, Booij's and Panther and Thornburg's approaches roughly converge in seeing a conceptual core accompanied by further meaning extensions, which may be projected onto a universal conceptual level, valid for all languages. In fact, similar analyses have

been proposed for other languages as well (cf. Dressler 1980 for a typological perspective).

Quite in contrast with this received opinion, Rainer has recently suggested a radically different interpretation for the facts occurring in Spanish as well as in Italian (cf. Rainer 2004a, b). In spite of the similar pattern observed synchronically, in which a range of different meanings is displayed by the derivatives respectively formed with the suffixes *-dor* and *-tore*, the diachronic development undermines an explanation simply based on meaning extensions like those assumed by Booij and Panther and Thornburg. The synchronic pattern occurring respectively in Spanish and Italian mirrors the Dutch and the English picture quite closely, at least for the higher positions of Booij's hierarchy:<sup>9</sup>

- |      |            |                                   |                            |
|------|------------|-----------------------------------|----------------------------|
| (13) | a. PERSON: | Sp. <i>juga-dor</i> 'player'      | < <i>jugar</i> 'to play'   |
|      |            | It. <i>gioca-tore</i> 'player'    | < <i>giocare</i> 'to play' |
|      | b. OBJECT: | Sp. <i>calza-dor</i> 'shoehorn'   | < <i>calzar</i> 'put on'   |
|      |            | It. <i>frulla-tore</i> 'mixer'    | < <i>frullare</i> 'to mix' |
|      | c. PLACE:  | Sp. <i>come-dor</i> 'dining room' | < <i>comer</i> 'to eat'    |

Elaborating on previous work by Malkiel (1988), Rainer (2004a) shows that, for Spanish, the actual agent/place polysemy results from medieval calques from Provençal, in which a homonymic collision of the nominals formed on the basis of the two Latin suffixes *-TÖRE(M)* and *-TÖRIU(M)* took place because of regular phonological change. Furthermore, for the agent/instrument polysemy the hypothesis is laid down that also in this case the actual state of affairs goes back to old calques from Catalan, in which a similar merge of the outcomes of the Latin suffixes *-TÖRE(M)* and *-TÖRIU(M)* occurred, and was then generalized. Notice that the two Latin suffixes were specialized for different meanings, in that *-TÖRE(M)* only displayed the agentive meaning, and *-TÖRIU(M)* only an (instrumental-) locative meaning (cf. Grandgent 1908: 21–22). Therefore, a homonymic collision is supposed to be the origin of the polysemy observed today.

As for Italian, a similar picture can be sketched for the suffix *-tore*. In this case, three possible sources are at the origin of the actual agent/instrument polysemy (cf. Rainer 2004b). The oldest, and sparse, formations attested until the Renaissance are regionalisms, coming from areas in which the outcome of Lat. *-TÖRIU(M)* happened to merge with the outcome of *-TÖRE(M)* because of regular phonological change. For in-

stance, the instrument noun for ‘soldering iron’, which is *saldatoio* from Lat. -TŌRIU(M) in the Tuscan dialect, on which Standard Italian is based, is attested as *saladûr* in Bolognese, and as *saldador* in Veneto. Since the correspondence between Tuscan terms with *-toio* and derivatives with *-tore* from other regions is fairly systematic, it can be asserted that the terms with *-tore* occurring in Italian texts are most likely regionalisms attested in areas where the difference between the two originally distinct suffixes was blurred.<sup>10</sup>

A second relevant source for instrument nouns with *-tore* is due to calques mostly from English, French and German during the era of the Industrial Revolution, such as It. *condensatore*, which is attested a few years after the English word (and instrument) *condensator* was coined. This represents the core of the modern formations with *-tore*, which have been very productive in the last two centuries.

Finally, a further road for the instrumental usage of *-tore* to come about was ellipsis, especially for some groups of words denoting unprototypical instruments like numbers (cf. *numero fattore*, *moltiplicatore* ‘factor, multiplier number’) and muscles (*muscolo adduttore*, *rotatore* ‘adductor, rotator muscle’). This meaning extension was already common in Medieval Latin. Notice that ellipsis as a source for such an instrumental usage is crucially connected with the general ‘participial’ function displayed by these derivatives, which has been common in Latin ever since (cf. Fruyt 1990), and is also a stable property of the Italian derivatives today (cf. Thornton 2004: 528):

(14) a. *cupienti liberorum, osori mulierum* (Pl., *Poe.* 74)

‘for one who wants to have children, but hates the women’

b. *victores, victis hostibus, legiones reveniunt domum* (Pl., *Am.* 188)

‘after the victory, defeated the enemies, the legions come back home’

c. *un socio fondatore / due soci fondatori*

‘one / two promoting member(s):MASC’

In (14a), the Latin derivative *ōsor* is used as participle of the defective verb *ōdī* ‘to hate’, whereas the Latin example in (14b) shows the use of these derivatives as modifiers, again typical of participles. Finally, the Italian example in (14c) testifies the modern usage. Rainer’s interpretation of the development of the suffix *-tore* has a direct bearing on the parallel Italian

suffix *-trice*, which is specified for feminine gender and displays a similar agent/instrument polysemy (cf. Lo Duca 2004: 356, 365–367 for details):<sup>11</sup>

- (15) a. *giocatrice* ‘player:FEM’  
 b. *lavatrice* ‘wash machine’  
 c. *una socia fondatrice / due socie fondatrici*  
 ‘one / two promoting member(s):FEM’

Furthermore, the *-trice* derivatives are also commonly used in the participial function as modifiers, as testified by (15c). Notice that, again, the Latin ancestor of this suffix could not be used for denoting instruments, and it was also used in the participial function:

- (16) a. *mater ... victrix filiae non libidinis* (Cic., *Clu.* 14)  
 ‘the mother, who won over her daughter, not over her passion’  
 b. *victriciaque arma* (Verg., *Aen.* 3, 54)  
 ‘and the victorious weapons’

Now, if we look at the diachronic development of the Italian suffix *-trice*, a picture emerges that comes quite close to the one sketched for its masculine counterpart *-tore*. The following table is based on data extracted from the Italian dictionary DISC, which reports for each entry the date of first attestation, wherever possible:

Table 2. The Italian feminine suffix *-trice* as attested through the centuries (DISC).

	13 <sup>th</sup>	14 <sup>th</sup>	15 <sup>th</sup>	16 <sup>th</sup>	17 <sup>th</sup>	18 <sup>th</sup>	19 <sup>th</sup>	20 <sup>th</sup>
Agent	3	4	1	3	2	1	2	10
Instrum.	-	1?	-	-	1	1	30	311

Besides the isolated Latinism *cicatrice* ‘scar’, the only early attestation of a *-trice* derivative displaying a sort of instrumental meaning is *matrice* ‘matrix’, which also is a Latinism, clearly originated from elliptical usages like *chiesa matrice* ‘mother church’. The second early attestation of (a sort of) instrumental meaning is the seventeenth century derivative *direttrice*,

which, besides the agentive meaning of ‘directress’, displays a geometrical meaning clearly related via ellipsis to expressions like *linea direttrice* ‘straight line’.

The real explosion in the usage frequency of the *-trice* derivatives is recorded from the nineteenth century onwards, i.e. in the age of the Industrial Revolution, when many derivatives were formed to name the new machines invented as a consequence of the technological progress. Notice that DISC correctly traces the instrumental meaning back to an elliptical origin from the locution with the feminine noun *macchina* ‘machine’.

At any rate, dictionary-based data are heavily distorted by the lexicographers’ bias towards noting only the more frequent and idiosyncratic items, discarding the completely regular and transparent formations, because “dictionary-users need not check those words whose meaning is entirely predictable from its elements, which by definition is the case with productive formations” (Plag 1999: 96). Thus, while the derivatives with instrumental meaning are recorded, the agentive formations are usually discarded, because they simply parallel their masculine counterparts, unless a specific meaning is conveyed as in the nineteenth century formation *visitatrice* ‘nurse’ or the twentieth century formation *indossatrice* ‘model’, which denote professions traditionally reserved for women. Given the lexicographers’ attitude, the data in Table 2 seem to report a major employment of *-trice* for denoting instruments, whereas the agentive meaning looks quite limited. As pointed out by Lo Duca (2004: 365), however, some dictionaries systematically report the *-trice* derivative as the feminine counterpart in lexical entries of the words suffixed with *-tore*.

In order to cope with this problem, research was carried out on the basis of a three-years corpus of the newspaper *La Stampa* containing about 75 million tokens (cf. Gaeta and Ricca 2003 for details). From this corpus the so-called *hapax legomena* formed with the suffixes *-tore* and *-trice* were extracted, i.e. words occurring once in the corpus, which, in such large corpora, are generally recognized to be very rare words and good candidates for being treated as neologisms. The different values of the masculine and feminine derivatives can be easily checked with the help of the corpus, as shown below for the three groups of meaning:

- (17) a. agentive meaning:  
*non corrispondenti al latte effettivamente conferito, né ai reali conferitori (St. 4-5-1997)*  
 ‘not corresponding to the really distributed milk, nor to those who effectively distributed it’

*la testimonianza di 23 raccontatrici di favole* (St. 25-9-1996)  
 ‘the testimony of 23 story-tellers:FEM’

b. instrumental meaning:

*diano fuoco allo spillatore della birra* (St., 28-8-1998)  
 ‘that they set fire to the beer dispenser’

*una vecchia snocciolatrice per le ciliegie* (St., 1-6-1996)  
 ‘an old stoning machine for the cherries’

c. participial function:

*le telefonate che denunciavano il piccione sporcatore* (St., 30-8-1996)

‘the calls that reported the dirtying pidgeon:MASC’

*Maude, la terribile mula scalciatrice* (St., 4-7-1996)

‘Maude, the terrible kicking mule:FEM’

In the following table, the derivatives for the two suffixes are reported, distributed according to their semantic value and their participial function:

Table 3. Corpus *La Stampa* (1996–1998): hapax legomena formed with the Italian suffixes *-tore* and *-trice*.

Meanings	<i>-tore</i>		<i>-trice</i>	
Agent noun	359	77.5%	95	42.2%
Instrument noun	60	13.0%	15	6.7%
Participial function	44	9.5%	115	51.1%
Tot.	463	100.0%	225	100.0%

The results are quite surprising because for both suffixes there is a small percentage of instrumental meanings, while at the same time the participial function is robustly present. Furthermore, for the feminine suffix, the participial function is largely dominant, which sheds a dark light on the possibility of interpreting the instrumental meaning as a straightforward extension from the basic agentive meaning. Rather, the participial function can be made responsible for the instrumental meaning via the ellipsis of a concrete head noun. No compelling evidence can be found in support of a cognitively-based pattern of meaning extension. Thus, both diachronic and



synchronic evidence depicts a scenario in which there is no place for nature: in the case of these Italian suffixes the agent/instrument polysemy doesn't seem to be related to any alleged conceptual contiguity of the two core meanings. The synchronic picture results from different sources, which are partly motivated by homonymic collision and are partly due to the very persistent participial function, which renders these derivatives, and in particular *-trice*, semantically very flexible in correspondence with the modified noun.

This does not deny any heuristic value to the generally assumed conceptual contiguity between agent and instrument. However, the evidence coming from these Romance languages warns against using its explanatory logic in a simplistic way, disregarding the other internal properties of a given linguistic system.

#### **4. Conclusion**

The dichotomy nature vs. nurture has proven useful in order to verify the potential of alleged cognitively-based explanations for controversial instances of homonymy and/or polysemy. A sharp opposition between synchrony and diachrony leads to an incomprehension of the dynamics underlying single cases of apparent homonymy, as has been shown for the occurrence of the verb *ginn* as passive morpheme in the Middle-Rhine German dialects. The latter has revealed a natural extension pattern based on common metaphors and metonymies.

On the other hand, the apparently clear-cut case of agent/instrument polysemy as attested in two Romance languages must rather be treated as the result of either the casual collision of two different suffixes because of the blind effect of phonological change, or of a participial function already present in the Latin mother tongue. In other words, it is a case for nurture.

Unless a previous conceptual contiguity among semantic categories is postulated a priori, which is allegedly supposed to motivate and induce the homonymic outcome as suggested by Leiss (1997) (cf. Gaeta 2006 for a critical review), it is necessary to put to interest the conceptual means offered by cognitive linguistics in the analysis of the languages as historically determined systems, carefully investigating the single linguistic phenomena before projecting them onto a slippery universal explanatory level.

## Notes

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1. In this paper, the discussion will be centered on the Luxembourgish variety. However, a similar state of affairs can be observed in other dialects of the same area as well (cf. Bellmann 1998 for a broader picture).
  2. There is no place here to discuss strictly morphological aspects like the difference between the forms *gi* and *ginn* in (1a) and (1b). Cf. Gaeta (2005) and Nübling (2006) for details.
  3. Lux. *wäerden* has become a modal verb with an epistemic value, whereas the future is expressed by the present form (cf. Nübling 2006).
  4. As explained by Haspelmath (1990), the Chinese pattern, which is also attested in a small nest of other Turkic and Ingush languages, appears well-motivated semantically by a loss of semantic specificity, in particular agentivity, which may give rise to passive usage. Accordingly, a particular grammaticalization channel is assumed for causative source verbs, which through a reflexive-causative stage, provides passive morphology. However, the Luxembourgish case is different, first of all because no reflexive-causative stage is attested, and secondly because a general equivalence with the inchoative MSG verb *werden* is observed.
  5. For some speculation on the possible antiquity of the existential usage of GIVE in Proto-Germanic, as well as in other Indo-European languages, cf. Joseph (2000), who at any rate does not reach any solid conclusion.
  6. The reduction and/or loss of case-marking may have surely contributed to this change by weakening the distinction between the accusative marking of the object in the transitive construction and the nominative marking of the predicate noun in the copula construction (cf. Gaeta 2005 for details).
  7. In this regard, see recently Lenz (2007).
  8. For sketchy historical surveys of this question, which goes back to the nineteenth century, cf. Ischtuganowa (2004) and Rainer (2005).
  9. The locative meaning is not attested in the standard Italian variety. However, forms like *pisciatore* ‘public urinal’ are attested in dialects or in substandard varieties (cf. Lo Duca 2004: 376). Moreover, the locative meaning is attested for old formations like *abbeveratore* ‘drinking trough’ (cf. Rainer 2004b).

10. Furthermore, Rainer (2004b) shows that for some dialects a process of back-formation must be assumed, because the outcomes of the two Latin suffixes happened to merge only in the plural, from which a common singular was arguably backderived.
11. The polysemy displayed by this suffix has also been considered to be a case of meaning extension, as for instance suggested by Lüdtke (1996: 264): “Die Produktivität dieses Suffixes [*scil.* of Lat. -TÖR, LG] in den romanischen Sprachen seit dem 19. Jahrhundert zur Bezeichnung von Geräten und Maschinen (it. *calcolatrice* ‘Rechenmaschine’) beruht auf der Übertragung von Personenbezeichnungen auf einen neuen Bezeichnungsbereich und ist nicht im Lateinischen angelegt”. [translation]

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