

**STUDI ITALIANI
DI LINGUISTICA
TEORICA
E APPLICATA**

PACINI EDITORE

SEMANTICA LESSICALE

**a cura di
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2 • 1999

SUMMARY

This paper presents an original lexical-functional account to so-called 'compound' prepositions and conjunctions in French. These items bring up an interesting subject for both lexical semantics and syntax in that their semantic and syntactic properties often do not correspond to principles of compositionality although they are formally complex. It is therefore assumed that, as for the synchronic status of compound prepositions and conjunctions, they are represented as single lexical items, i.e., they are adopted into the lexicon. According to their degree of lexicalization in the sense of synchronic adoption into the lexicon, compound prepositions and conjunctions may be divided into two subclasses. Whereas the one subclass still allows for its internal structure to be subject of certain syntactic operations, the other does not. This ongoing lexicalization is considered to be basically motivated by cognitive processes of language recognition and memorization.

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TREE AND FRUIT.
A COGNITIVE-ONOMASIOLOGICAL APPROACH*

1. INVISIBLE-HAND PROCESSES

In recent years, the very successful 'invisible-hand' theory has been challenged especially in historical lexicology.¹ Is not the lexicon a too multifarious, and that largely extralinguistic, domain to admit prognostics for the issues of language change?

Nevertheless, rhetoricians and historical semanticists have worked at all times with a set of universal categories, when describing and categorizing semantic change such as metaphor, metonymy, extension and restriction of meaning etc.² These types of change of meaning are undoubtedly recurrent in the diachrony of all languages. But how can we integrate them into our description and explanation of lexical invisible-hand processes? Only *ex post* can we notice that "once again" a given word has changed its meaning in a metaphorical way, in a metonymical way etc. We are never able to predict that a given word will change its meaning in a particular way and in a particular direction. Thus, the aforementioned categories will only permit us to make very general statements such as: "If a word changes its meaning, this can be done exclusively in a metaphorical, metonymical etc. way". This is what I call the **weak version of an invisible-hand theory** for lexical semantics (Koch in press a).

2. SEMASIOLOGICAL AND ONOMASIOLOGICAL ASPECTS OF LEXICAL CHANGE

Up to this point, only the change of meaning of a given lexical item has been considered. In semiotic terms, this is a **semasiological** problem. To take just one example (see below Figure 1): in a semasiological perspective, we can say that the conceptual meaning of the lexical item Lat. *latro* (=

L_y) changed from HIGHWAYMAN (C_s) to THIEF (C_t), when becoming O.Fr. *lerre*. But viewed from a different perspective, another process was taking place hand in hand with the other. The concept THIEF (C_t), which was expressed by the lexical item Lat. *fur* (L_x), came to be expressed by *latro* > O.Fr. *lerre* (= L_y). This second concomitant process is not a change of meaning, but a change of designation with respect to a given concept (C_t). In semiotical terms, it constitutes an **onomasiological** problem.

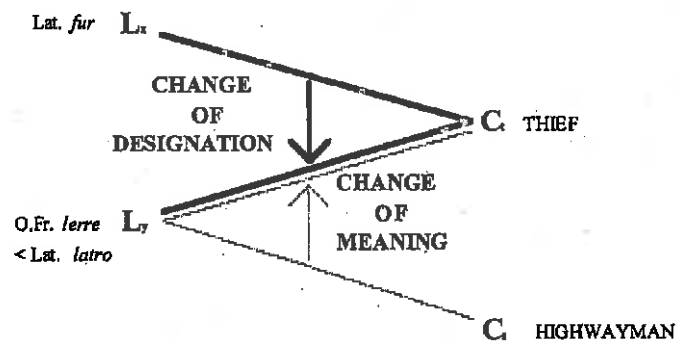


Fig. 1. Change of designation and change of meaning (Lat. *fur* / *latro* > O.Fr. *lerre*).

With respect to lexical invisible-hand processes, it seems to be much more promising to start with the onomasiological perspective. Speakers do not speak in order to change language (cf. Coseriu, 1958; Paul, 1968: 32; Keller, 1994; Koch & Oesterreicher, 1996; Koch, in press a). They rather use lexical items in order to express things in the most effective and successful way, and that is a truly onomasiological problem. So, if there were any lexical invisible-hand processes, it would be more realistic to ask the following question: "If a speaker wants to find a new expression L_y for a given target concept C_t (onomasiological perspective), from which conceptual source concept C_s does he typically take it (semasiological perspective)?" In the case of Figure 1, we can hypothesize that Latin speakers used *latro* to express the concept THIEF, because it originally expressed a much more intensive concept, namely HIGHWAYMAN, and therefore helped to reinforce hyperbolically the expression of reproof, of anger etc. (in contrast to this, the word *latro* in itself was not predestined to change its meaning in a certain direction).

Only by integrating in this way the primary onomasiological perspective with the secondary semasiological perspective can we hope to discover

recurrent patterns of (change of) designation. From the methodological point of view, the recurrent character of these patterns has to be tested on broad cross-linguistic material. If we can be sure that certain patterns of designation reappear **polygenetically**, we will probably have discovered cognitive principles that guide lexical change like an invisible hand. So, only onomasiological, cross-linguistic investigations are supposed to corroborate what I would call the **strong version of an invisible-hand theory** for lexical semantics (Koch, in press a; cf. also Koch, 1997).

The onomasiological starting point for cross-linguistic diachronic lexicology has yet another advantage. For a second example, let us trace the "destiny" of the concept THIEF (C_t) in French in an onomasiological perspective. Between Old French and Modern French *lerre* (L_x) was replaced by *voleur* (L_y):

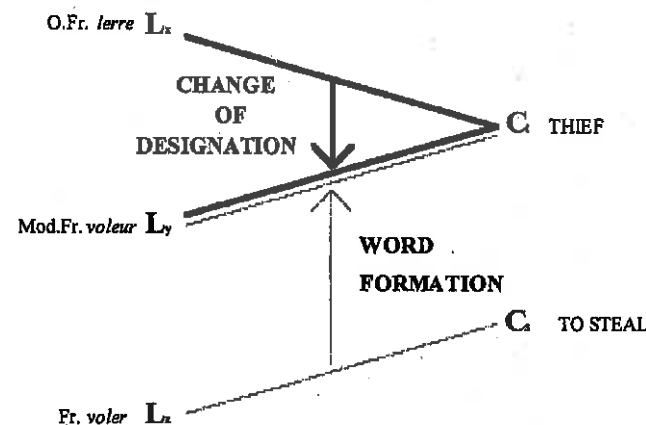


Fig. 2. Change of designation and word formation (O.Fr. *lerre* / M.Fr. *voleur*).

This is another case of change of designation, but without any change of meaning, because *voleur* (L_y) has been formed *ex novo* by derivation from *voler* (L_z) that designates TO STEAL (C_s). If the onomasiological perspective proves to be an ideal starting point for diachronic lexicology, then there is no reason why we should exclude from our material cases of word formation, of conversion, of idioms etc. To put it another way: only if our starting point is onomasiological can we really grasp the great variety of changes of designation. In the following, I want to exemplify that this method allows us to detect the common cognitive bases of several types of change of designation (including meaning change) and that these cognitive

bases can help us to account for invisible-hand processes in the diachrony of lexical semantics.

In two research projects at the university of Tübingen, we are working along these lines, investigating the conceptual domain of the HUMAN BODY.³ With such a domain that is inseparably interwoven with human nature, it may not be very surprising to find universal cognitive constants that trigger invisible-hand processes. By the way of contrast, I want to investigate in this contribution a conceptual domain that lies outside the human body.

3. THE TREE-FRUIT FRAME

The examples I propose to discuss concern the designations of the concepts TREE and FRUIT, or rather of their subordinate concepts, like OAK, BEECH etc., on the one hand, and ACORN, BEECHNUT etc., on the other. In conjunction with this, I would like to raise the following questions:

- (i) Are the designations of trees and fruits totally random?
- (ii) If they are not, can we recognize any typical, recurrent patterns?

As to the first question, I have, until now, noted the following five types of morpho-lexical relations between tree names and fruit names:

Table 1. Tree names and fruit names - types of morpholexical relations.

(1)	fruit name based on tree name:				
	fruit name	←	tree name;	e.g.	derivation: Germ. <i>Eichel</i> 'acorn' ← <i>Eiche</i> 'oak' composition: Eng. <i>fir cone</i> ← <i>fir</i>
(2)	tree name based on fruit name:				
	tree name	←	fruit name;	e.g.	derivation: Fr. <i>pommier</i> 'apple-tree' ← <i>pomme</i> 'apple' composition: Eng. <i>apple-tree</i> ← <i>appl</i>
(3)	tree name identical with fruit name:				
	tree name	=	fruit name;	e.g.	Russ. <i>груша</i> 'pear; pear-tree'
(4)	tree name lexematically identical with fruit name, but different in gender:				
	tree name	≈	fruit name;	e.g.	Lat. <i>malum</i> 'apple' ≈ <i>malus</i> 'apple-tree'
(5)	fruit name without any morphological relation to tree name:				
	fruit name		tree name;	e.g.	Eng. <i>acorn</i> <i>oak</i>

This typology confirms what we might have guessed intuitively. Except for type (5), there exist significant morpho-lexical relations between tree names and fruit names. Therefore, it is highly probable, though not necessary, that a tree name is related to a fruit name and/or vice versa. In this conceptual domain, there seems to be a tendency toward nonrandom designations.

The explanation for this tendency already marks out the answer to question (ii) above. Undoubtedly, TREE and FRUIT constitute a striking example of a sort of frame that is particularly "stable" or "dense" from a cognitive point of view.⁴ To my way of thinking, frames are prototypical *gestalts* supporting what, from an associationist perspective, have been called 'contiguities' (Koch 1995, 1999).

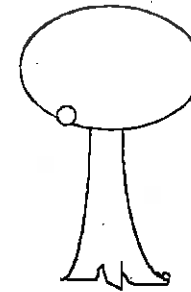


Fig. 3. TREE-FRUIT frame.

Obviously, a "dense" frame supports salient and "stable" contiguities. Thus, in the case of TREE and FRUIT, the "density" of the respective frame provides us with a strong rationale for diachronic and synchronic morpho-lexical facts. At the diachronic level, we actually observe that new designations for trees and fruits are in large part formed along the lines of the TREE-FRUIT contiguity (in both directions). It follows from this that at the synchronic level four out of the five types of existing designations in this domain ((1)-(4)) exhibit motivational relations that are based on the TREE-FRUIT contiguity.

Practically all of the relevant diachronic processes and synchronic relationships (according to Table 1) involve conceptual contiguity.⁵

First, there are derivations that express the transition from one concept to a contiguous concept within the same frame. This morpho-lexical derivational pattern is called *Ausgriff* by Gauger (1971: 66-74; cf. also Schifko 1979; Blank 1997b, 1998; Koch 1999). It is one of the manifestations of type (1) (Germ. *Eiche* 'oak' → *Eichel* 'acorn') as well as of type (2) (Fr.

pomme 'apple' → *pommier* 'apple-tree'). The synchronic result of this diachronic process is a derivative of the *Ausgriff* type.⁶

Secondly, there are compositions that by their modifier express the relation to a contiguous concept within the same frame and that by their head express a taxonomical relation to a superordinate concept (cf. Blank 1997b, 1998; Koch 1999). We can call this morpho-lexical pattern 'hyponymical contiguity composition'. It is another manifestation of type (1) (Eng. *fir* → *fir cone*) as well as of type (2) (Eng. *apple* → *apple-tree*). The synchronic result of this diachronic process is a compound of the hyponymical contiguity type. To ensure precision, we have to distinguish this kind of composition from a morphosyntactically different process that represents still another possible manifestation of types (1) and (2): the formation of a lexicalized syntagm (e.g. Lat. *ilex* 'chestnut oak' → *glans iligneae* 'acorn of the chestnut oak'). But because the hyponymical contiguity mechanism is the same, in the following we will put compounds and lexicalized syntagms of this kind together.

Thirdly, there is a change of meaning via contiguity as in Russ. ~~береза~~ 'pear', hence 'pear tree' (type (3)). This is what we call 'metonymical change',⁷ and its synchronic result is metonymical polysemy.

The fourth and last solution is gender change, whose synchronic result is gender alternation as in Lat. *malum* (n.) 'apple' = *malus* (f.) 'apple-tree' (type (4); cf. Koch in press a). In the present case, gender alternation conveys a contiguity effect (but obviously it is open to other cognitive effects as well; cf. Lat. *dominus* 'master' = *domina* 'mistress').

4. SALIENCE EFFECTS AND DESIGNATIONAL PATTERNS

But question (ii) presented in section 3. may prompt us to a much more specific answer.

At first sight and from a logical point of view, the motivated types of tree and fruit designations (1)-(4) seem equivalent and interchangeable. But does the density of the TREE-FRUIT frame really imply that it is designed analogously for every type of TREE and FRUIT? Or could we imagine that there are cognitively relevant differences between types of TREE-FRUIT frames that have repercussions on the designational options (1)-(4)?⁸ To test this issue empirically, I have assembled cross-linguistic material that provides us with some interesting evidence. I collected the designations of BEECH and BEECHNUT as well as of PEAR and PEAR TREE in 27 European and extra-European languages.⁹

Table 2. BEECH/BEECHNUT and PEAR/PEAR TREE in a cross-linguistic perspective.

	BEECH	BEECHNUT	PEAR TREE	PEAR
1. Latin	<i>fagus</i>	⇒ <i>glans fagea</i>	<i>pirus</i> =	<i>pirum</i>
2. French	<i>hêtre</i>	* <i>fagina (glans)</i> > ⇒ <i>faîne</i>	<i>poirier</i> =	<i>poire</i>
3. Spanish	<i>haya</i>	⇒ <i>hayuco</i>	<i>peral</i> =	<i>pera</i>
4. Italian	<i>faggio</i>	⇒ <i>faggina/faggiola</i>	<i>pero</i> =	<i>pera</i>
5. Portuguese	<i>faia</i>	⇒ <i>fruto da faia</i>	<i>pereira</i> =	<i>pera</i>
6. Catalan	<i>faig</i>	(<i>baca</i>) <i>fagea</i> > ⇒ <i>faja</i>	<i>perer(a)</i> =	<i>pera</i>
7. Rumanian	<i>fag</i>	<i>jitr</i>	<i>păr</i> =	<i>pară</i>
8. Sardinian	<i>fau, fazu</i>	<i>fruttu de fau, de fazu</i>	<i>pira, arbore de pira</i> =	<i>pira</i>
9. English	<i>beech(tree)</i>	⇒ <i>beechnut</i>	<i>pear-tree</i> =	<i>pear</i>
10. German	<i>Buche</i>	⇒ <i>Buchecken</i>	<i>Birnbaum</i> =	<i>Birne</i>
11. Swedish	<i>bok</i>	⇒ <i>bokollon</i>	<i>pär<tr>träd</tr></i> =	<i>pär<tr>trön</tr></i>
12. Danish	<i>bøg(etrøe)</i>	<i>olden</i>	<i>paeretrøe</i> =	<i>paere</i>
13. Norwegian	<i>bøk(etre)</i>	⇒ <i>bøkenatt</i>	<i>paeretre</i> =	<i>paere</i>
14. Dutch	<i>beuk(eboom)</i>	⇒ <i>beukenootje</i>	<i>pereboom</i> =	<i>peer</i>
15. Russian	бук	⇒ <i>буковый орех</i>	груша =	груша
16. Polish	<i>buk</i>	⇒ <i>bukiew</i>	<i>grusza</i> =	<i>gruszka</i>
17. Czech	<i>buk</i>	⇒ <i>bukvice</i>	<i>hruška, hrušeň</i> =	<i>hruška</i>
18. Ancient Greek	όξύα, -η	ἄχλος, βάλος	ἄπιος =	ἄπιον
19. Modern Greek	οξύα, οξύά	βελανίδι	αχλαδιά, απιδιά =	αχλάδι, απίδι
20. Breton	<i>fao</i>	<i>finij</i>	<i>gwez-pér</i> =	<i>pér</i>
21. Persian	<i>ālaš</i>	⇒ <i>miwe-ye ālaš</i>	<i>deraxt-e golābi</i> =	<i>golābi</i>
22. Hungarian	<i>bükk(fa)</i>	⇒ <i>bükkmakk</i>	<i>körtefa</i> =	<i>körte</i>
23. Turkish	<i>kaymağacı, akgürgen</i>	⇒ <i>kaym kozalağ</i>	<i>armut ağacı</i> =	<i>armut</i>
24. Baskisch	<i>fagōa</i>	⇒ <i>fäggo-ekurra</i>	<i>madariondo, udareondo</i> =	<i>madari, udar</i>
25. Arabic	<i>zān</i>	⇒ <i>šamar azzān</i>	<i>šāğara al-kumma θrai</i> =	<i>kumma θrai</i>
26. Japanese	<i>buna</i>	⇒ <i>bunanomi</i>	<i>nashinoki</i> =	<i>nashi</i>
27. Chinese	<i>shān máo jū</i>	⇒ <i>shān máo jū zi</i>	<i>lǐ shù</i> =	<i>lǐ</i>

1A

On closer inspection, the choice among options (1)-(4) is not totally arbitrary. Two fundamentally different cognitive constellations within the TREE-FRUIT frame clearly affect the designations of trees and fruits. On the basis of Table 2, we make the following observations.

4.1. TREE as figure and FRUIT as ground

On the one hand, there exist trees that are important for man in and of themselves, because they supply him, for example, with wood, because they give him shade, because they serve as a symbol etc. In these cases, the TREE concept naturally is more salient than the FRUIT concept. From the point of view of gestalt theory, TREE is the figure and FRUIT is the ground:

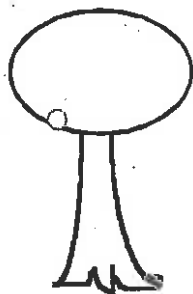


Fig. 4. TREE (= figure) more salient than FRUIT (= ground).

BEECH-BEECHNUT is a typical example of the cognitive constellation corresponding to Figure 4. In this case, the only options represented in the sample are type (1) and type (5):

4.1.1. Type (1)a and b (notation → in Table 2)

The fruit name depends morphologically on the tree name. The FRUIT concept is expressed either by a derivative of the *Ausgriff* type based on the lexeme that expresses the TREE concept (as in Group (1)a), or by a compound or a lexicalized syntagm of the hyponymical contiguity type having the lexeme¹⁰ that expresses the TREE concept as its modifier (as in Group (1)b). In all these cases, the motivational direction is TREE → FRUIT, according to the salience type of Figure 4.

Group (1)a:
Ausgriff derivation
TREE → FRUIT

3. Spanish
4. Italian
16. Polish
17. Czech

Group (1)b:
hyponymical contiguity
composition/lexicalized
syntagm
TREE → FRUIT

1. Latin
7. Portuguese
9. English
10. German
11. Swedish
13. Norwegian
14. Dutch
15. Russian
21. Persian
22. Hungarian
23. Turkish
24. Basque
25. Arabic
26. Japanese
27. Chinese

8. Sardinian

15

4.1.2. Type (5) (notation in Table 2)

There is no morphological relation at all between the fruit name and the tree name. The FRUIT concept and the TREE concept are expressed by two totally distinct lexemes (as in Group (5)). There is no cognitive motivation; the two designations are opaque in relation to each other.

Group (5):
no morphological relation at all

7. Rumanian
12. Danish
18. Ancient Greek
19. Modern Greek
20. Breton

In Groups (1)a and (1)b the diachronic processes are still immediately visible in the synchronic motivational relationships, whereas in Group (5) the absence of a diachronic relationship corresponds exactly to the absence of a

synchronic motivational relationship. There are, however, two borderline cases.

4.1.3. Type (1)/(5) (notation → in Table 2 on diachronic grounds)

In two of the languages of our sample, the diachronic and the synchronic evidence do not totally coincide. With respect to Lat. *fagus*, the lexicalized syntagms **fagina glans* and *baca fagea*, underlying – via ellipsis – Fr. *faîne* and Ctl. *faja* respectively, correspond to Group (1)b in a diachronic perspective (and that is what justifies the notation → in Table 2). On the synchronic level, things have changed, but the situation is slightly different in the two languages. In Catalan, the clear morphological motivation has faded away, but the phonological form of the lexemes *faig* and *faja* still suggests a vague motivational relationship, whereas in French, on the contrary, the motivational integration of *faîne* has completely disappeared, because O.Fr. *fou* (< Lat. *fagus*) has been replaced by *hêtre* (diachronically, a Frankish loanword). Thus, French belongs synchronically to Group (5).

Group (1)/(5):

diachronically = Group (1)b:

hyponymical contiguity compound/lexicalized syntagm
TREE → FRUIT

synchronically more or less near to Group (5):
no clear morphological relation

2. French

6. Catalan (synchronically, vague phonological analogy)

Notwithstanding these differences in detail, we can conclude all in all that with the cognitive constellation corresponding to Figure 4 the only options represented in the sample are either the motivational direction TREE → FRUIT or the absence of motivation (with possible discrepancies between the diachronic and the synchronic level).

4.2. FRUIT as figure and TREE as ground

On the other hand, there exist fruits that in an of themselves are important for man, because they have a pleasant relish, because they are a kind of wholesome food, because they give juice etc. In these cases, the

FRUIT concept is more salient than the TREE concept. From the point of view of gestalt theory, FRUIT is the figure and TREE is the ground:

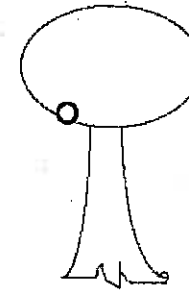


Fig. 5. FRUIT(= figure) more salient than tree (= ground).

PEAR-PEAR TREE is a typical example of the cognitive constellation corresponding to Figure 5. In this case, the options represented in the sample are types (2), (3), (4), and, incidentally, a special subtype of type (1) (discussed last in this section):

4.2.1. Type (2)a and b (notation ← in Table 2)

The tree name depends morphologically on the fruit name. The TREE concept is expressed either by a derivative of the *Ausgriff* type based on the lexeme that expresses the FRUIT concept (as in Group (2)a), or by a compound of the hyponymical contiguity type having the lexeme that expresses the TREE concept as its modifier (as in Group (2)b). In all these cases, the motivational direction is FRUIT → TREE, according to the salience type of Figure 5.

Group (2)a:
Ausgriff derivation
FRUIT → TREE

Group (2)b:
hyponymical contiguity
compound
FRUIT → TREE

- 2. French
- 3. Spanish
- 5. Portuguese
- 6. Catalan
- 17. Czech (also belonging to Group (3))
- 19. Modern Greek

- 9. English *↳ S. Jacobson*
- 10. German
- 11. Swedish
- 12. Danish
- 13. Norwegian
- 14. Dutch

24. Basque
20. Breton
21. Persian
22. Hungarian
23. Turkish
25. Arabic
26. Japanese
27. Chinese

4.2.2. Type (3) (notation = in Table 2)

The fruit name and the tree name are identical. At the synchronic level, we have in these cases a polysemy based on the FRUIT-TREE contiguity, i.e. a solution consisting in metonymical polysemy. Since, from a diachronic (and semasiological) point of view, the original meaning of this lexeme corresponds to the fruit name, we clearly can assimilate this metonymical polysemous type to the motivational direction FRUIT → TREE, according to the salience type of Figure 5.

Group (3):
metonymical polysemy;
motivational direction FRUIT → TREE

15. Russian *← Sardinian*
17. Czech (also belonging to Group (2))

4.2.3. Type (4) (notation = in Table 2)

The fruit name and the tree name are lexematically identical, but different in gender. For this type, we can assume a symmetrical motivational relationship between FRUIT and TREE.

Group (4):
gender change;
symmetrical motivational direction FRUIT ← → TREE

1. Latin
4. Italian
7. Rumanian
18. Ancient Greek

4.2.4. Type (1)x (notation → in Table 2)

In one of the languages of our sample (16. Polish), we apparently find the type (1). But note that, at least diachronically, *gruszka* constitutes a diminutive derivative from *grusza*. Since diminutive formations are not

based on contiguities, but on taxonomical relations (e.g. a *kitchenette* is a kind of *kitchen*), we are dealing in this case with the exploitation of a taxonomically oriented type of word formation for the expression of a contiguity relation. Therefore, this type – incidentally, a rather marginal one – cannot be simply assimilated to Group (1)a.¹¹

Group (1)x:
diminutive derivation
TREE → FRUIT

16. Polish

All in all, with the cognitive constellation corresponding to Figure 5 the options represented in the sample are either the motivational direction FRUIT → TREE (Groups (2) and (3)) or a symmetrical type of motivation (Group (4)), the “diminutive type” (Group (1)x) being rather marginal.

5. CONCLUSION

Certainly, the cognitive-onomasiological investigation of the TREE-FRUIT frame should be enlarged. A more representative language sample and a larger number of different TREE and FRUIT concepts would increase the validity of the results. Nevertheless, the material in the analysis above already suggests some general tendencies in this domain.

Trees and fruits are not what they are, but they are for us what we make of them within our general human experience. Even in a conceptual domain external to the human body, it is therefore possible to discover cognitive constants that affect cross-linguistic designational patterns. If we view things from a primarily onomasiological perspective completed by a secondary semasiological perspective, we observe that new designations of trees and fruits are not created in a totally arbitrary way. First of all (section 3.), the density of the TREE-FRUIT frame is so compelling that, as a rule, designations of trees and fruits are not independent of each other (the only exceptions being those of Group (5) for BEECH and BEECHNUT). Secondly, even if the two cognitive constellations within the TREE-FRUIT frame sketched out in section 4. do not prescribe the designational choices in a deterministic way, they strongly restrict their interlinguistic variation.

In other words, when we imagine a person who is creating a new designation for a tree or a fruit, we can predict the range of his/her concept desi-

gnational options, no more and no less. So, even for lexical semantics the strong version of an invisible-hand theory is in sight.

NOTES

* I express my gratitude to Keith Myrick (Tübingen) for the stylistic revision of this paper.

¹ For invisible-hand theory, cf. for example Lüdtké (1986), Keller (1994). Critical remarks from the point of view of historical lexicology are found in Baldinger (1989, 1993). Cf. also Heringer (1992: 280f).

² Cf. Nyrop (1913), Bréal (1921), Roudet (1921), Ullmann (1962: 211-235, 1966: 238-248), Lausberg (1990). For a more systematic, cognitive foundation of these and other categories of description cf. Nerlich/Clarke (1992), Warren (1992), Koch (1994, 1995, 1999), Blank (1997a); a general survey in Fritz (1998).

³ These are: 1. *Dictionnaire étymologique et cognitif des langues romanes* (DECOLAR), directed by Andreas Blank and myself, a project treating Romance languages; 2. the project *Lexical change – polygenesis – cognitive constants* as part of the Interdisciplinary Research Center 441 "Linguistic Data Structures".

⁴ Cf. Waltereit (1998: 18f.). For the notion of 'frame' in general cf. for example Minsky (1975), Tannen (1979), Fillmore (1985), Barsalou (1992).

⁵ As we will see below (4.2.4.), in our material there is one example (Pol. *grusza* → *gruszka*) of a different – and more complex – kind.

⁶ The conceptual models proposed by Schwarze (1995: 500ff.) in order to explain word formation processes are, in fact, frame models.

⁷ Metonymical change is one of the best known types of semantic change (s. works cited in n. 2); for a more precise characterization, cf. Croft (1993), Blank (1997a: 230-281), Koch (1999, Ms).

⁸ Cf. already the observations in Coseriu (1964: 167f).

⁹ This is only a provisional language sample. It does not meet the criteria formulated for language samples in the realm of cross-linguistic grammatical-typological studies (cf. Nichols 1992, Rijkhoff et al. 1993). For the moment, lexical typology is at its beginnings (Koch in press b), and we still have to elaborate adequate criteria for lexicological language samples, which are not automatically identical with the criteria valid for grammatical typology. As shown by our material in Table 2, including even genetically cognate languages in a lexical typological sample makes sense inasmuch as they find independent solutions. In this respect, the pairs Fr. *poire/poirier*, Port. *pera/pereira*, and Ctl. *pera/perar(a)* are only manifestations of one and the same monogenetic pattern, whereas these three on the one hand and the pairs It. *pera/pero* and Rum. *para/par* on the other hand are polygenetic patterns (though, as we will see, supported by the same conceptual relation).

¹⁰ In certain cases, like Eng. *beech (tree)*, there exists a lexical variant in which this lexeme occurs as modifier of a compound whose head is a word for tree (see also 12. Danish, 13. Norwegian, 14. Dutch, 22. Hungarian). In 23. Turkish, this is even the canonical form. Nevertheless, we can assimilate all these cases to our Group (1)b, because the compound only explicates the taxonomical relationship BEECH—TREE and thereby confirms the motivational direction tree → fruit.

¹¹ Note however that in some languages of group (1)a (3. Spanish, 4. Italian) the suffixes for fruit names cannot clearly be distinguished, at least etymologically, from diminutive suffixes. Could this be a "neutral" pattern for fruit names, independently of the two fundamental cognitive constellations represented in Figure 4 and 5?

SUMMARY

This article seeks to demonstrate that primarily onomasiological, cross-lingui-

stic investigations allow us to detect the cognitive bases of invisible-hand processes even in the, seemingly multifarious, area of lexical semantics. This investigation of the exemplary conceptual pairs BEECH/BEECHNUT and PEAR TREE/PEAR using a sample of 27 European and extra-European languages points out that the designations of trees and fruits display nonrandom patterns subject to cognitive constants that characterize two different types of TREE-FRUIT frames.

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