

# Argument inheritance as a metonymic effect

Ulrich Detges, München (ulrich.detges@romanistik.uni-muenchen.de)

## Abstract

Nominalization combines morphological aspects (the derivation of nouns from verbs) with syntactic ones (argument structure/valency). The notion of argument inheritance captures the intuition that both aspects seem to obey the same (syntactic) regularities. However, as will be argued in the present paper, this impression is incorrect. Although morphological derivation and nominal valency make use of the same conceptual knowledge (which explains the apparent similarities between them), both types of linguistic structure serve different functional purposes and therefore differ in the way in which this knowledge is exploited linguistically. The metonymy-based account proposed in this paper provides simple explanations for a wide range of problems concerning morphological as well as syntactic aspects of nominalization. This will be illustrated with particular reference to the so-called activity model proposed by Schwarze (1995).

Das Phänomen der Nominalisierung beinhaltet morphologische Gesichtspunkte (die Derivation von Nomina aus Verben) ebenso wie syntaktische (insbesondere Probleme der nominalen Valenz/Argumentstruktur). Der Begriff der Argumentvererbung gibt die Intuition wieder, dass beide Aspekte der Nominalisierung denselben (syntaktischen) Regelmäßigkeiten folgen. In der vorliegenden Arbeit möchte ich jedoch zeigen, dass dieser Eindruck unzutreffend ist. Obwohl morphologische Derivation und syntaktische Valenz dasselbe konzeptuelle Wissen voraussetzen (was die scheinbaren Ähnlichkeiten zwischen ihnen erklärt), erfüllen sie völlig unterschiedliche Funktionen; aus diesem Grund unterscheiden sie sich in der Art und Weise, wie das konzeptuelle Wissen jeweils sprachlich genutzt wird. Auf der Grundlage der hier dargelegten Überlegungen zur Rolle der Metonymie in den konzeptuellen Grundlagen der Nominalisierung lassen sich viele alte Probleme der Forschung in einem neuen Licht betrachten. Eine besondere Rolle spielt in diesem Zusammenhang das so genannte Tätigkeits-Modell (Schwarze 1995).

## Introduction

Nominalization combines morphological aspects with syntactic ones. An event noun such as Sp. *elección* ‘election’ not only is morphologically derived from the verb *elegir* ‘to elect’, but noun and verb share similar sets of thematic roles (compare (1a, b)). A major difference between both cases is the fact that these participants are obligatory when realized as arguments of the verb, but facultative when governed by the noun. Since the noun is morphologically derived from the verb (and not vice versa), it is generally assumed that its argument structure, too, is a syntactic “inheritance” passed on to it by its verbal base.

- (1) a. *La elección de un presidente<sub>y</sub> por los Venezolanos<sub>x</sub>.*  
‘The election of a president by the Venezuelans.’  
b. *Los Venezolanos<sub>x</sub> eligen a un presidente<sub>y</sub>.*  
‘The Venezuelans elect a president.’

In this paper, I want to show that argument inheritance is an optical illusion caused by the fact that both verb and noun share the same conceptual base. This claim will be discussed with special reference to a subclass of nominalizations, namely AGENT nouns. In this class of nominals, it will be argued, argument inheritance is an effect which is based on a metonymic relationship between the derived noun and its verbal base.

## 1. The problem

Nominalizations not only refer to events denoted by their base verbs (as illustrated in (1a, b)), but also to the participants involved in such events. Thus Sp. *elector* ‘voter’ denotes the AGENT participant associated with the activity of VOTING. (2) gives a brief overview of some participant types which can play a role in nominalization.

- (2)
- |                                     |                |                                    |
|-------------------------------------|----------------|------------------------------------|
| a. <i>consumidor</i> ‘consumer’     | AGENT of       | <i>consumir</i> ‘to consume’       |
| b. <i>despertador</i> ‘alarm clock’ | INSTRUMENT of  | <i>despertar</i> ‘to wake up s.b.’ |
| c. <i>producto</i> ‘product’        | RESULT of      | <i>producir</i> ‘to produce’       |
| d. <i>destintario</i> ‘addressee’   | BENEFICIARY of | <i>destinar</i> ‘to address’       |

Some of these participant nominalizations behave like event nominalizations<sup>1</sup> in that they have the faculty to take other nominals as their arguments. Thus, along with *Peter consumes much toothpaste* and *consumption of toothpaste*, we find *consumer of toothpaste*, i.e. an AGENT noun governing the OBJECT argument. This constellation is represented in a more abstract fashion in (3).  $N_x$  stands for the AGENT Argument,  $N_y$  for the OBJECT.

- (3)
- a.  $N_x$  consume  $N_y$
  - b. *consumption* of  $N_y$  by  $N_x$
  - c. *consumer<sub>x</sub>* of  $N_y$

The relationship between the different cases represented by (3a, b, c) respectively has given rise to controversies in the literature. Olsen (1986, 1992) makes a strong case for argument inheritance also in (3c). According to her, the specific function of the suffix *-er* in (3c) is to prevent the AGENT participant of the base from being realized as an argument of the nominal head (Olsen 1986: 78-81). Instead, the suffix attributes the AGENT role to the head noun of the entire phrase (i.e. to *consumer*, e.g. in *consumer<sub>x</sub> of tooth paste<sub>y</sub>*). This mechanism is morphological in nature insofar as it is governed by the suffix. At the same time, however, it is subject to the general principles of syntax, above all the  $\Theta$ -criterion which controls the mapping of semantic roles to syntactic functions (Olsen 1986: 80). This means that the concept of argument inheritance crucially presupposes a theoretical level of word-internal syntax. Put more simply, according to this view, morphology functions along the same lines as syntax.

---

<sup>1</sup> This term is used here as a synonym of the notion of *nomen actions*. This usage differs substantially from the notion of event noun proposed by Levin & Rappaport (1988), see below, section 3.3.

This proposal has been criticized on a number of grounds. First, suffixes specialized in deriving AGENT nouns often can also be used for the derivation of INSTRUMENTS (e.g. Engl. *grinder* < *to grind*). However, INSTRUMENT nominalizations behave differently from AGENT nouns in that they are unable to syntactically govern the direct object argument of the corresponding verb (compare (4a, b), see also Levin & Rappaport 1988, Rappaport Hovav & Levin 1992:131).<sup>2</sup> This shows that argument inheritance is not a systematic property of the suffix *-er* per se. The capacity of English *er*-nouns to govern object arguments of the corresponding base verbs rather seems to depend on semantic parameters (see below 3.3).

(4) a. INSTRUMENT

\*grinder<sub>x</sub> of coffee<sub>y</sub> ‘machine to grind coffee’

b. AGENT

The *grinder<sub>x</sub> of knives, scissors, razors and other cutlery<sub>y</sub>* has been a persistent figure in the streets of London for centuries. (homepages. ihug. co. nz /~awoodley/cries/grinder.html, 18.2.2004).

Second, the suffixes which derive AGENT nouns from verbs in many languages also serve to build AGENT nouns from other nouns. This holds for Engl. *-er* (e.g. *pott-er* < *pot*) and Germ. *-er* (*Pförtner* [gate: suff] ‘doorman’ < *Pforte* ‘gate’), and, to a much lesser extent, for Sp. *-dor* (*leñador* [wood: suff] ‘woodcutter’ < *leña* ‘wood’).<sup>3</sup> In these cases, the agenthood of the derived noun cannot be explained as the heritage of a verbal base (Szegeti 2002:45).

(5) a. verbal base: *consumi-dor* [consum: suff] ‘consumer’ < *consumir*  
‘to consume’

b. nominal base: *leña-dor* [wood: suff] ‘woodcutter’ < *leña* ‘wood’

c. nominal base: *viña-dor* [vineyard: suff] ‘wine-grower’ < *viña* ‘vineyard’

In earlier approaches, inspired by the transformationalism of early generative grammar (e.g. Marchand 1965, arguing against Lees 1963), the standard proposal for the solution of this problem was to stipulate sentence-structures with “implicit” or “virtual” verbs, from which nouns like (5b, c) were to be derived (see also Lüdtke 1978:64). A more recent theory, elaborated by Maurice Gross and his disciples (M. Gross 1981, G. Gross 1991), brings together nominalization, nominal argument structure and a theory of light verbs (“verbes supports”). On this view (which cannot be laid out in sufficient detail here), nominalizations without verbal bases are derived from underlying sentences containing light verb constructions. In the spirit of an approach of this kind, a formation as *leñador* [wood: suff]

---

<sup>2</sup> Compounds such as *coffeegrinder* will not be considered here.

<sup>3</sup> Apart from the two cases mentioned in (5b, c), *-dor* always combines with verbal bases.

‘woodcutter’ would be derived from a sentence containing a complex predicate of the type *hacer leña* ‘to make wood’. This could allow to account for the numerous denominal AGENT nouns of Spanish with the suffix *-ero* (see (6)).

- |     |   |   |  |
|-----|---|---|--|
| (6) | a. <i>zapat-ero</i> [shoe: suff] ‘shoemaker’        | < | HACER <i>zapatos</i> ‘to make shoes’   |
|     | b. <i>pan-ad-ero</i> [bread: suff] ‘baker’          | < | HACER <i>pan</i> ‘to make bread’       |
|     | c. <i>carbon-ero</i> [coal: suff] ‘charcoal burner’ | < | HACER <i>carbón</i> ‘to make charcoal’ |

In many cases however, this approach leads to quite unsystematic collections of virtual predicates for a single suffix. Thus, for Spanish AGENT nouns in *-ero*, one would have to assume highly heterogeneous virtual base predicates (Laca 1986: 59, see (7)).

- |     |  |   |   |
|-----|--|---|---|
| (7) | a. <i>campan-ero</i> [bell: suff] ‘bellringer’   | < | TOCAR <i>campanas</i> ‘to ring bells’               |
|     | b. <i>mensaj-ero</i> [message: suff] ‘messenger’ | < | LLEVAR <i>mensajes</i> ‘to carry messages’          |
|     | c. <i>vacqu-ero</i> [cow: suff] ‘cowboy’         | < | APACENTAR <i>vacas</i> ‘to herd cows’               |
|     | d. <i>arpon-ero</i> [harpoon: suff] ‘harpooner’  | < | PESCAR CON <i>un arpón</i> ‘to fish with a harpoon’ |

The third problem for which any theory of argument inheritance would have to account is the fact that nominalizations are not the only nouns capable of governing arguments. Thus, beside nominals with deverbal heads such as (8a), we find non-derived nouns with similar argument structures (see (8b)).<sup>4</sup>

- |     |   |   |   |
|-----|---|---|---|
| (8) | a. the <i>planner</i> <sub>x</sub> of this project <sub>y</sub>   | < | N <sub>x</sub> <i>plan</i> N <sub>y</sub> |
|     | b. the <i>architect</i> <sub>x</sub> of this project <sub>y</sub> | < | ∅   |

The existence of pairs like (8a, b) has been taken as evidence against the assumption of argument inheritance. According to Fanselow (1988), the correct interpretation of a complex nominal of the type *the architect of this project* in (8b) can be construed by inducing the “prominent relation” (Fanselow 1988:106) of ‘planning’, which is part of the speakers’ stereotyped world-knowledge (and which is the same as in the case of *planner* in (8a)). However, it remains unclear what the status of this “prominent relation” and its role in derivation are. Moreover, the conclusions to be drawn from evidence such as (8a, b) seem to be controversial. According to Fanselow, such examples show that there is no need for a

---

<sup>4</sup> This (syntactic) problem is at the heart of the above mentioned works of M. Gross (1981) and G. Gross (1991).

proper theory of argument inheritance.<sup>5</sup> Others, on the contrary, propose to maintain the notion of argument inheritance, but to restrict it to deverbal nouns, i.e. to case (8a) (Meibauer 1995:105, Szigeti 2003:45-6).

In what follows, I want to propose a metonymy-based account of verbal valency, nominal argument structure, and morphological derivation. In particular, I am going to show that morphology and syntax make different use of conceptual knowledge, and that, therefore, there can be no such thing as a word-internal syntax. As will become clear, the metonymy-based account proposed in this paper provides simple explanations for a wide range of problems concerning morphological as well as syntactic aspects of nominalization. This will be illustrated with particular reference to the so-called ACTIVITY model, a semantic model which I am going to introduce in the next section.

## 2. The ACTIVITY model (Schwarze 1995)

It is a long-standing observation in morphology that many nominalization suffixes cover a range of two or more semantic categories (see already Herman Paul (1897) for German). (9a) gives a brief survey of the types of words in which Germ. *-ung* can appear. Curiously, nominalization suffixes in many different languages exhibit similar arrays of functions (Jackendoff 1975:651, Panagl 1978, Dressler 1980). In (9b) this is illustrated for Sp. *-miento* (for Spanish AGENT noun suffixes see Laca 1986:169-71).

(9) a. Germ. *-ung*

1. ACTION	<i>Erlösung</i> ‘redemption’ < <i>erlösen</i> ‘to redeem’
2. AGENT	<i>Regierung</i> ‘government’ < <i>regieren</i> ‘to govern’
3. INSTRUMENT	<i>Kupplung</i> ‘clutch’ < <i>kuppeln</i> ‘to operate the clutch’
4. RESULT/OBJECT	<i>Rechnung</i> ‘bill’ < <i>rechnen</i> ‘to calculate’
5. PLACE	<i>Wohnung</i> ‘flat’ < <i>wohnen</i> ‘to live, to stay’

---

<sup>5</sup> The concept of argument inheritance is also rejected by Ehrich & Rapp (2000). According to these authors, the capacity of a noun to govern arguments depends entirely on its lexical semantics. Moreover, they show that the syntax of nominalization follows regularities which are independent from the verbal base. As we shall see later on, this approach is compatible with the conclusions reached in the present paper.

b. Sp. *-miento*

1. ACTION	<i>acercamiento</i> ‘approach’ < <i>acercarse</i> ‘to approach’
2. AGENT	<i>acompañamiento</i> ‘company’ < <i>acompañar</i> ‘to accompany’
3. INSTRUMENT	<i>acoplamiento</i> ‘clutch, coupling’ < <i>acoplar</i> ‘to couple’
4. RESULT/OBJECT	<i>rendimiento</i> ‘yield, revenue’ < <i>rendir</i> ‘to yield’
5. PLACE	<i>aparcamiento</i> ‘parking lot’ < <i>aparcar</i> ‘to park’

The functions illustrated in (9) are the core categories of the so-called ACTIVITY model proposed in Schwarze’s (1995) grammar of Italian. Some of these categories (which Schwarze does not define explicitly) are straightforward, in particular the notions of the AGENT, the INSTRUMENT and the PLACE. The examples given in Schwarze (1995:500) indicate that the category of the OBJECT refers to various kinds of participants affected or effected by some event. The category central to the model is the notion of ACTIVITY (“Tätigkeit”) which Schwarze sometimes uses in variation with the notion of ACTION (“Handlung”) without explicitly defining both concepts. According to common usage, an ACTION may be defined as an event brought about intentionally by some AGENT. An ACTIVITY, in turn, is an ACTION which takes place repeatedly or habitually. Hence, every ACTIVITY is an ACTION but the reverse is not true. In what follows, singular, i.e. non-habitual, ACTIONS will be referred to as ACTS. The difference between ACTS and ACTIVITIES is pertinent to nominalization. For example *painter* in *the painter of the Mona Lisa* is the AGENT of an ACT while in *Leonardo was a painter*, it refers to the AGENT of an habitual ACTIVITY (for a more fine-grained classification based on this distinction see Laca 1986: 89-290). Whereas for verbs, the category of ACTIVITY is only of secondary importance, it is extremely common in AGENT nouns. I shall return to this point in section 3.3.

The model described so far is represented in (10). Apart from the centrality of the ACTION/ACTIVITY, the relative position of the categories in the diagram does not presuppose any privileged relationship between individual roles (even though, as I am going to show later, such privileged relationships do exist).

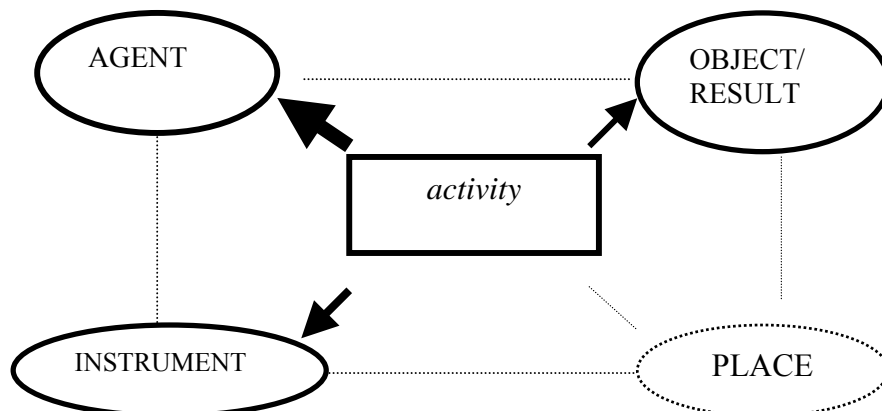


In comparison to this picture, the array of functions of Germ. *-er* exhibits some striking similarities, but also significant deviations. Like in the case of Sp. *-dor*, the most important function of *-er* is the derivation of AGENT nouns, while the second biggest group formed with *-dor* are INSTRUMENT nominalizations. Unlike Sp. *-dor*, Germ. *-er* can be used to derive nouns which denote the RESULTS of the ACTION expressed by the base verb, e.g. Germ. *Kratzer* [scratch: suff] ‘scratch’ < *kratzen* ‘to scratch’ (see (13c-e)).<sup>6</sup> This group is highly productive.

- |      |  |                                      |            |
|------|--|--------------------------------------|------------|
| (13) | a. <i>Lehrer</i> [teach: suff] ‘teacher’     | < <i>lehren</i> ‘to teach’           | AGENT      |
|      | b. <i>Wecker</i> [wake: suff] ‘alarm clock’  | < <i>wecken</i> ‘to wake sb. up’     |            |
|      |  |                                      | INSTRUMENT |
|      | c. <i>Rülpser</i> [burp: suff] ‘belch, burp’ | < <i>rülpsen</i> ‘to burp’           | RESULT     |
|      | d. <i>Seufzer</i> [sigh: suff] ‘sigh’        | < <i>seufzen</i> ‘to sigh’           | RESULT     |
|      | e. <i>Treffer</i> [hit: suff] ‘hit’          | < <i>treffen</i> ‘to hit, to strike’ | RESULT     |
|      | f. <i>Kratzer</i> [scratch: suff] ‘scratch’  | < <i>kratzen</i> ‘to scratch’        | RESULT     |

In return, German *er*-nouns never denote PLACES. Formations like Engl. *diner* ‘place where people go in order to dine’ are inexistent in German.<sup>7</sup> The distribution of functions described so far is summed up in (14).

- (14) Distribution of functions of Germ. *-er*.



<sup>6</sup> For the sake of simplicity I leave aside the fact that some nouns of this group, in particular those which denote the AUDIBLE RESULT of physiological ACTS (e.g. *Rülpser* ‘belch, burp’, *Lacher* ‘laugh’, *Seufzer* ‘sigh’ etc.) have come to denote an INDIVIDUAL OCCURRENCE OF THE ACT itself. This can be explained as an instance of metonymic change, since in these cases, the AUDIBLE RESULT is the most salient manifestation of the ACT and has the same duration in time as the latter.

<sup>7</sup> A comprehensive overview of the various functions of Engl. *-er* is given in Ryder (2000).



The comparison between (12) and (14) gives a clear picture of the similarities, but also of the differences between Germ. *-er* and Sp. *-dor*. Note however that both descriptions are incomplete. Germ. *-er* differs from Sp. *-dor* in that it allows the formation of nouns also from nouns (e.g. *Pförtner* [gate: suff] ‘doorman’ < *Pforte* ‘gate, door’). This case, which can easily be fit into the ACTIVITY model, will be discussed in section 4.1. Another difference concerns certain grammatical properties of the Spanish *dor*-nouns. First, nominal formations in *-dor* can very regularly also be used as adjectives, e.g. *un hablador* ‘a talker, a talkative person’ vs. *un tío muy hablador* ‘a very talkative guy’. In this respect *dor*-nouns conform to a general permeability of the noun-adjective distinction in Spanish, which is absent from German.<sup>8</sup>

Importantly, the ACTIVITY model is unsuited for the description of fine-grained language-specific grammatical facts of the type described in the last paragraph. It is a cognitive map with categories which are language-unspecific and arguably universal in nature. However, as has become clear from the comparison between Sp. *-dor* in (12) and Germ. *-er* in (14), the way in which individual suffixes fill the different slots provided by the model is *conventional*, i.e. it differs from suffix to suffix and is subject to diachronic change (for Sp. *-dor* see Detges, forthcoming).

### **3. ACTIVITY model and frame semantics**

Having described various components of the ACTIVITY model in the last section, we now have to determine its theoretical status in more detail. What exactly is the nature of the facts which underlie this model and how can their prominent role in word formation be explained?

From the literature on the cognitive bases of verbal valency, linguists are familiar with the notions of *frame* (Fillmore 1977) and *scene* (Heringer 1984). Frames (or scenes) are bundles of concepts which are connected with each other in human experience. Thus, e.g., the concept of REPAIRING is closely linked to a THEME (e.g. a car) which exhibits some DAMAGE and therefore has to be repaired. Moreover, it presupposes the existence of an AGENT who

---

<sup>8</sup> Another striking particularity of Sp. *-dor* (which it shares with the corresponding suffixes in other Western Romance languages, e.g. Fr. *-eur* and It. *-tore*) is the fact that typically the INSTRUMENT function can also be marked by the feminine form of the suffix, e.g. *lavadora* ‘washing machine’, *podadora* ‘hedge clippers’ etc. In cases where both a masculine and a feminine designation for an INSTRUMENT exist, the masculine form normally refers to a smaller or half mechanical device (e.g. *envasador* ‘bottling funnel’) whereas the feminine noun describes a bigger and fully automatic machine (e.g. *envasadora* ‘bottling machine’, Staib 1988:138-141).

performs the action of repairing, sometimes using an INSTRUMENT. Certain types of THEMES are typically repaired in special PLACES - e.g. cars are repaired in garages, clocks at the watchmaker's etc. Concepts which belong to a common frame are stored in the human mind in such a fashion that addressing one of them will immediately retrieve either the entire frame or at least some of the other concepts contained in it. Elements belonging to the same frame are linked to each other by a relationship of contiguity (cf. Koch 1999).

### 3.1. Frames, scenes, and verbal valency

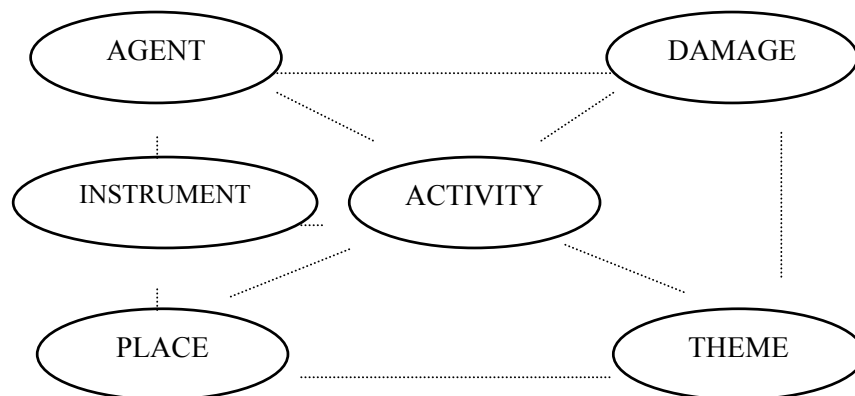
Frames are structured cognitive representations of the world. As such, they are basically extra-linguistic in nature. However, their internal organization is reflected in certain linguistic structures. Valency configurations of individual verbs are selections of elements contained in particular frames (Waltereit 1998:53-4). Thus, the verb *reparar*, which in Spanish represents the ACTION of REPAIRING, can select different sets of semantic roles belonging to the frame in question (compare (15a-d)). Linguistic elements and structures based on frame knowledge are linked to each other by metonymic relations. Hence, not only the verb and the different semantic roles within the individual valency configurations under (15a-d) are in metonymic relationship to each other, but also the entire valency configurations.

(15) Frame and valency configurations - the realization of the REPAIR frame in Spanish

- |   |                   |
|---|-------------------|
| a. <i>Juan repara su coche</i><br>'John repairs his car'                                | AG ← V → THEME    |
| b. <i>Juan repara el daño</i><br>'John repairs the damage'                              | AG ← V → DAMAGE   |
| c. <i>Este taller no repara coches</i><br>'This garage does not repair cars'            | PLACE ← V → THEME |
| d. (*) <i>Esta llave inglesa no repara coches</i><br>'This wrench does not repair cars' | INSTR ← V → THEME |

It follows from (15a-d) that the REPAIR scene contains the following elements:

(16) The REPAIR frame



### 3.2. Different degrees of conceptual proximity

The semantic roles selected in (15a-c) exhibit different degrees of conceptual proximity towards the ACTION expressed by the verb *reparar*. This is obvious for the PLACE and the INSTRUMENT (see (15c, d)), which under normal circumstances will not be represented as subjects of the sentence, but rather as prepositional free adjuncts see (15e, f).

(15) e. Juan repara su coche *en su taller*                      AG ← V → OBJ, PLACE  
       ‘John repairs his car *in his garage*’

f. Juan repara su coche *con una llave inglesa*            AG ← V → OBJ, INSTR  
       ‘John repairs his car *with a wrench*’

Free adjuncts are unspecific of particular verbs, because the semantic roles they represent are not typical of special frames. Thus, any type of ACTION performed by some AGENT can be carried out by means of an INSTRUMENT, and any type of ACTION occurs at some PLACE. The contiguity relation of free adjunct participants (as the INSTRUMENT and the PLACE) with the frame represented by the verb is less strongly anchored in the speakers’ knowledge than the contiguity of complement participants, e.g. the THEME, the DAMAGE or the AGENT in (15a-e) (for experimental evidence, see Heringer 1984: 45-47). For this reason, encoding peripheral participants like the INSTRUMENT and the PLACE as syntactic complements of the verb is more costly than the encoding of participants more central to the frame. In (15c, d), this can be told from the fact that both sentences require special interpretations in order to appear both meaningful and syntactically correct. Thus, the subject NP of (15c) does not really refer to the garage as a PLACE, but rather to the GROUP OF PEOPLE normally associated with the PLACE. In other words, it is a metonymic paraphrase

of an AGENT participant. Sentence (15d) is equally problematic, since it excludes both an ACT and an ACTIVITY interpretation and expresses the SUITABILITY of the wrench for repairing cars (Levin & Rappaport 1988:1070). Many native speakers judge it as ill-formed, because a more expectable expression of the SUITABILITY interpretation would be *esta llave inglesa no es para reparar coches* ‘this wrench is not for repairing cars’. Moreover, both (15c) and (15d) appear more acceptable as negative assertions, because otherwise the information they convey seems redundant. However, both restrictions disappear to the extent that the INSTRUMENT participant is a referent with more AGENT-like properties (see (15g), for a short typology of INSTRUMENT types, see also Levin & Rappaport 1988:1071).

- (15) g. *Este programa repara automáticamente el registro de Windows [...] (http://www.softdownload.com, 25.02. 2004) ‘This program automatically repairs the Windows register’*

Not only PLACE and INSTRUMENT, but also AGENT, THEME and DAMAGE exhibit different degrees of proximity with regard to the concept of REPAIRING. First, the DAMAGE and the THEME are in an extremely narrow contiguity to one another, since the THEME is directly affected by the DAMAGE. Second, the DAMAGE is the concept most intimately linked to the notion of REPAIRING, by which it is logically presupposed (there can be no REPAIRING unless there is a DAMAGE). By contrast, the AGENT is relatively unspecific of the concept of REPAIRING, since AGENTS are involved in all kinds of ACTIONS. Thus, there exists a hierarchy of relative associative proximity among the concepts contained in the REPAIR frame with regard to the central concept of REPAIRING.

- (17) DAMAGE > THEME > AGENT > INSTRUMENT > PLACE

Curiously, this hierarchy seems not to obtain for derivation, since, as we have seen in section 2 for Germ. *-er* and Sp. *-dor*, functions which are peripheral in (17) such as the INSTRUMENT can play a far more prominent role in derivation.

### **3.3. Valency vs. derivation**

A first difference between “simple” frames such as (15) and the ACTIVITY model is the fact that the latter represents a higher level of abstraction: it is an abstract frame-*type* which stands for a large number of specific “simple” frames. In particular, it covers “simple” frames centered around ACTIVITIES and other types of ACTIONS. As an abstract frame-*type*, the

model is non-exhaustive in the sense that it is in principle open to further semantic roles, depending on the simple frames evoked by individual nouns.<sup>9</sup>

Further major differences between the ACTIVITY model und “simple” frames have to do with the fact that word formation and verbal valency serve different functional purposes.

Valency configurations of the type represented in (15a-h) are representations of complex states of affairs. The various configurations of the verb *reparar* in (15a-h) have in common that they represent states of affairs centered around the concept of REPAIRING. Differences between the individual configurations in (15a-f) mainly have to do with the importance given to possible participants. For example, even though (15a) and (15b) refer to exactly the same extra-linguistic state of affairs, there is a difference between them: (15a) highlights the involvement of the AGENT and the THEME, while (15b) focuses on the AGENT and the DAMAGE instead. Put more generally, the purpose of these configurations is to impose different perspectives on the state of affairs in question. Valency configurations are lexical properties of individual verbs. They are conventionalized (i.e. prefabricated) “tools” put at the disposal of speakers. Their purpose is to perspectivize complex states of affairs. In a functional view, verbal valency is a type of linguistic structure which serves the function of *predication* (for a more in-depth exploration of this functional dimension, see Sailer & Premper 1991).

The ACTIVITY model on the contrary captures certain regularities in word-formation. Unlike verbal valency, word-formation is a linguistic strategy of *referent qualification* and, ultimately, of *reference tracking* (for this functional dimension, see Sailer & Lehmann 1982). Whereas in the verbal predication (18a) it is asserted that some complex state of affairs is true, a nominal construction of the type (18b) serves to characterize and possibly to identify a certain individual. In a construction of the type (18b) *the organizer of this congress*, this is done via a social role performed by the referent, i.e. via her involvement in an ACTION of a certain type. As a strategy of referent identification, derivation is in competition with other linguistics techniques, such as calling the referent by her proper name or referring to her deictically or anaphorically (see (19)).

---

<sup>9</sup> Thus, the role of the OBJECT is an abstract macro-role which can accommodate a range of more specific semantic roles. Hence, in a complex nominal such as *the repair of the car*, it realizes as the THEME participant, in *the repair of the damage* it is specified as the DAMAGE.

- (18) a. She organized this congress  
b. The organizer of this congress  
c. The organizer

- (19) a. The person over there  
b. Mrs. Smith  
c. She

*Nomina actions* of the type *the election (of a president by the Venezuelans)* are no counter-examples to the claim that nominalizations serve the purpose of referent-identification. They represent the special case that the “individual” referred to is the state of affairs (the ACTION, ACTIVITY or ACT) itself.

The difference in function between verbal valency and word formation just pointed out provides explanations for a number of differences between both types of linguistic structure. First, it explains why the complements of deverbal nouns are never obligatory, even if the corresponding arguments of the underlying verb are. Complex states of affairs (predicated by verbs) normally obtain for at least one participant who consequently will be realized as an obligatory argument. For the qualification of referents, on the contrary, the use of a nominal head without any further argument is often sufficient, e.g. simply *the organizer* or *the election*, if the omitted arguments are inferable from the context or the situation.

Second, as a strategy of referent qualification, word formation is especially economic in cases where the type of referent in question is, by virtue of her social role, *habitually* involved in some state of affairs. This explains why AGENT nouns derived from ACTIVITIES (i.e. *baker, teacher, painter, manager* etc.) are more common in word formation than those derived from (non-habitual) ACTS (i.e. *the painter of the Mona Lisa*). Verbal valency, on the contrary, is used more often to predicate *singular* states of affairs than habitual ones. In many languages, AGENT-nominalizations referring to professions (*baker, teacher, painter, manager*) are among the largest subclasses of ACTIVITY nouns. Normally, these nouns do not govern arguments. According to Levin & Rappaport (1988), this has to do with the fact that they are nonevent nouns. In contrast, *painter* in *the painter of the Mona Lisa* does not refer to the profession of painting but to an AGENT of a singular ACT. Only in this case, it is – still according to Levin & Rappaport (1988) – an event noun and is therefore capable of taking an argument. However, in light of the view outlined here, I want to propose a much simpler explanation. It is a well-known fact that verbs can be realized without any of their

arguments, if they denote ACTIVITIES, e.g. *Peter paints (for twenty years now)*, because in such cases, it is the ACTIVITY itself which is in focus. Profession nouns such as *painter* in *he is a painter for twenty years now* present the analogous case in nominalization. Here, the noun is realized without its OBJECT argument because the professional ACTIVITY itself, rather than an ACT directed towards a single OBJECT (as in *the painter of the Mona Lisa*) is highlighted. For the reasons outlined above, this phenomenon is much more common in nominalization than in verbal valency.

A third difference between simple frames of the kind (17) and the ACTIVITY model concerns the status of the categories INSTRUMENT and PLACE. While being peripheral in “simple” frames (see above, (17)), they play a central role in the ACTIVITY model. Again, this difference is rooted in the functional difference between predication on the one hand and referent qualification on the other. As has been pointed out, any ACTION is bound to occur at some PLACE, but ACTIONS, especially when they are non-habitual, do not necessarily occur at the same type of place. E.g. ACTIONS of EATING can materialize in many places – people typically eat at home and in restaurants, but they also eat while walking in the street or driving around in their car. Therefore, valency configurations of verbs meaning ‘to eat’, e.g. Sp. *comer*, Germ. *essen* or Engl. *to eat* normally do not contain a PLACE argument, while at the same time being open for a specification of PLACE by means of a free adjunct. Put more simply, from the point of view of the ACTION, the structural necessity to specify some PLACE is peripheral. In word formation on the contrary, referents are qualified by their involvement in states of affairs. Thus, there are referents whose main function is to serve as PLACES where people normally EAT, and which consequently are qualified by reference to this function. This is the case for Sp. *comedor* [eat: suff] ‘dining room’, derived from *comer* ‘to eat’ or for Engl. *diner* derived from *to dine*. Put more simply, from the point of view of certain individual referents, the contiguity relation between PLACE and ACTIVITY may be central. Thus, the difference between predication and referent qualification entails a shift in perspective which in turn explains the different status of the PLACE within verbal valency and derivation respectively. This is less clear for INSTRUMENT participants, since there are INSTRUMENTS which can appear as subjects in valency configurations of certain verbs (see (15g)), just as there are INSTRUMENTS which cannot (see the discussion of (15d)). In the literature on this issue it has been claimed that valency and derivation behave identically in this respect, i.e. if a verb allows the derivation of an INSTRUMENT nominal, it will also allow an INSTRUMENT participant to be realized as subject (Rappaport & Levin 1992:146).

That this is not so can easily be told from very common examples, e.g. Germ. *Hörer* [hear: suff] ‘(telephone) receiver’, i.e. ‘INSTRUMENT designed for HEARING an interlocutor on the telephone’ or Germ. *Schläger* [hit: suff] ‘racket, club’, i.e. ‘INSTRUMENT intended to HIT objects such as tennis or golf balls.’ In both cases, the realization as subjects of the base verb is extremely difficult, especially in contexts where it should be easily available, if the idea of an isomorphism between verbal valency and derivation was correct:

- (20) a. \*Der *Hörer*<sub>N</sub> *hörte*<sub>V</sub> Frau Meier nicht.  
‘The *receiver* [hear: suff]<sub>N</sub> did not *hear*<sub>V</sub> Frau Meier.’  
b. \*Dieser *Schläger*<sub>N</sub> *schlägt*<sub>V</sub> bloß Tennisbälle.  
‘This *racket* [hit: suff]<sub>N</sub> only *hits*<sub>V</sub> tennis balls.’

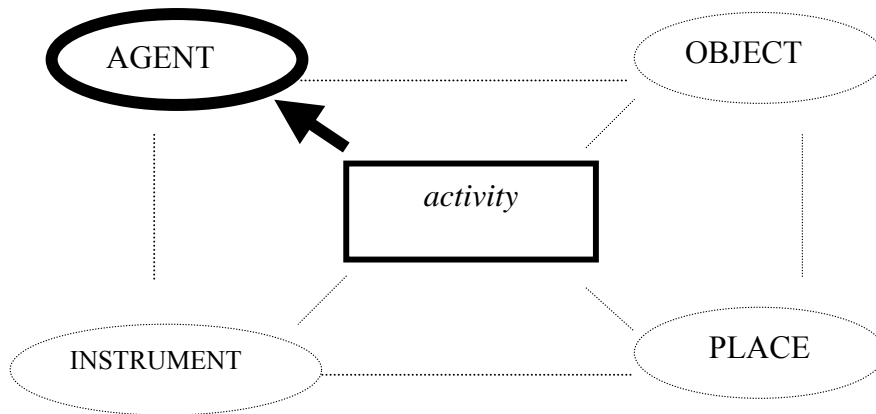
From what has been argued in this section, it follows that word formation along the categories of the ACTIVITY model is not a symmetrical image of verbal valency, as the idea of argument inheritance suggests. Even though verbal valency and derivation both make use of the same world-knowledge, they serve different communicative purposes and consequently exhibit notable differences in the fashion in which this world knowledge is utilized.

#### 4. Frame semantics and morphology

As has been pointed out in the previous section, the ACTIVITY model represents extra-linguistic knowledge. Derivation on the contrary is a linguistic procedure which distinguishes itself from other techniques of referent qualification with respect to the amount of world knowledge which is linguistically exploited. A derived word, e.g. Germ. *Spiel-er* [play: suff] ‘player’ by definition consists of a single lexical element, *spiel-* ‘play’, and of an affix, in this case *-er*. The function of the affix is to signal that the referent of the entire word is in a metonymic relationship to the concept invoked by the lexical element (in the case of *Spiel-er* [play: suff] ‘player’ it is the AGENT of the concept PLAY). However, no explicit mention is made of further concepts available from world knowledge, e.g. of the OBJECT, the INSTRUMENT, the PLACE etc., which could contribute to further qualify the referent. Normally such concepts are inferable from situational or general world knowledge. Thus, in the context of a football game, it is straightforward that *Spieler* ‘player’ refers to the AGENT of an ACTIVITY which is directed towards an OBJECT of the type FOOTBALL, even though this concept is not explicitly named within the word *Spiel-er* ‘player’.



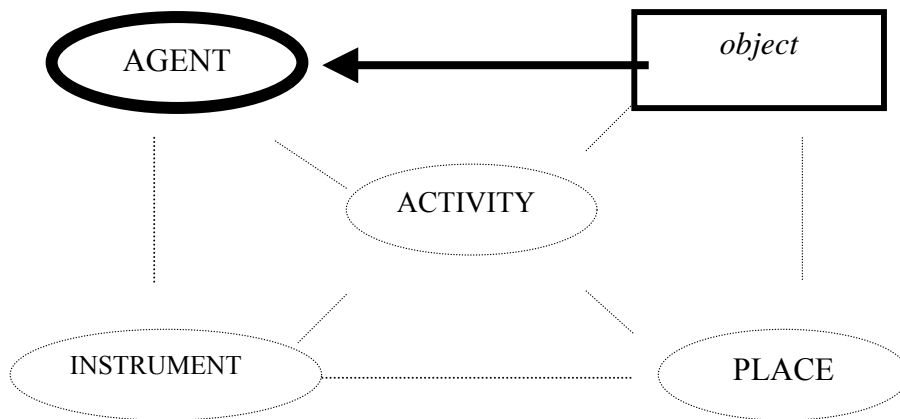
(21) Germ. *Spiel-er* [play: suff]



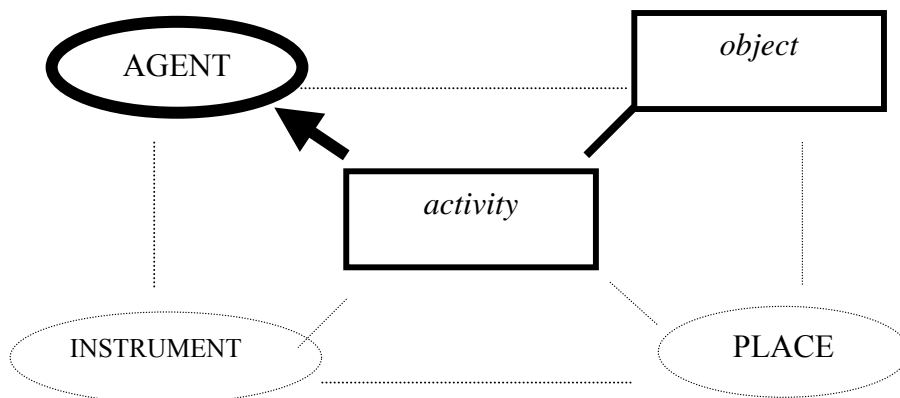
#### 4.1. AGENT nouns without verbal bases

The observations made in the last paragraph shed new light on the problem posed by AGENT nouns without verbal bases (see above, section 1, examples (5) – (7)). In these cases, there is no need to hypothesize “virtual” predicates – from the assumption that the concepts of the ACTIVITY model are related to each other by metonymic links, it follows that in examples like *leña-dor* [wood: suff] ‘woodcutter’, the precise nature of the ACTIVITY in question is simply inferred from encyclopedical world knowledge. This becomes clear when one compares compounds as Germ. *Fußball-spiel-er* [football-play: suff] with derivations of the type *Fußball-er* [football: suff], which both mean ‘socket player’. In both cases, not only the referent but also the contiguous world knowledge addressed by the respective word are identical, but in the compound *Fußball-spiel-er*, which overtly names the ACTIVITY in question, this is done in a more explicit way, while in *Fußball-er*, the nature of the ACTIVITY has to be inferred.

(22) Germ. *Fußball-er* [football: suff]



(23) Germ. *Fußball-spiel-er* [fotball: play: suff]

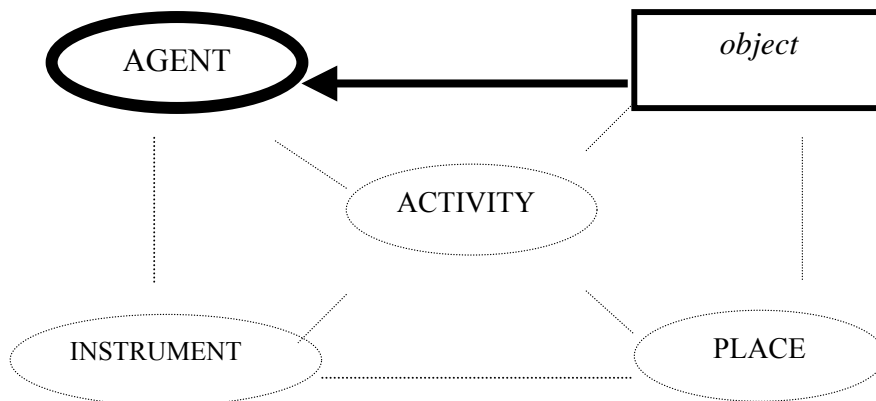


It follows from this that nouns as Engl. *potter*, Germ. *Fleischer* [meat: suff] ‘butcher’ or Sp. *aguador* [water: suff] ‘water-seller’ which are not derived from verbs, are nevertheless AGENT nouns, since they are derived from OBJECTS of inferable ACTIVITIES .

(24) AGENT nouns derived from OBJECT nouns

- a. *carbon-ero* [coal:suff] ‘charcoal burner’ < HACER *carbón* ‘to make charcoal’
- b. *lech-ero* [milk:suff] ‘milkman’ < VENDER *leche* ‘to sell milk’
- c. *herr-ero* [iron: suff] ‘blacksmith’ < FORJAR *hierro* ‘to forge iron’

(25) AGENTS derived from OBJECTS

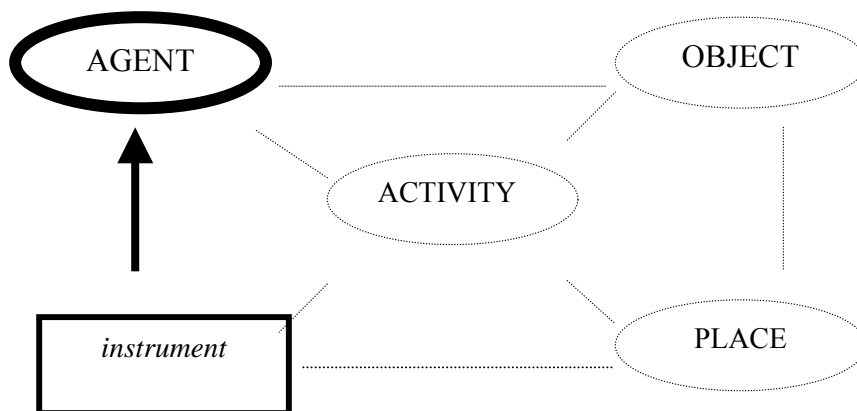


In many cases, AGENT nouns are derived from the other slots of the ACTIVITY model, i.e. from the INSTRUMENT or the PLACE. AGENT nouns of this kind would be particularly difficult to deal with in a virtual-verb approach.

(26) AGENT nouns derived from INSTRUMENT nouns

- |   |                 |
|---|-----------------|
| a. Sp. <i>pistol-ero</i> [gun: suff] ‘gunman’ < <i>pistola</i> ‘gun’  | Activity: SHOOT |
| b. Germ <i>Trompet-er</i> [trumpet: suff] < <i>Trompete</i> ‘trumpet’ | Activity: PLAY  |
| c. Engl. <i>drumm-er</i> [drum: suff] < <i>drum</i> ‘drum’            | Activity: BEAT  |

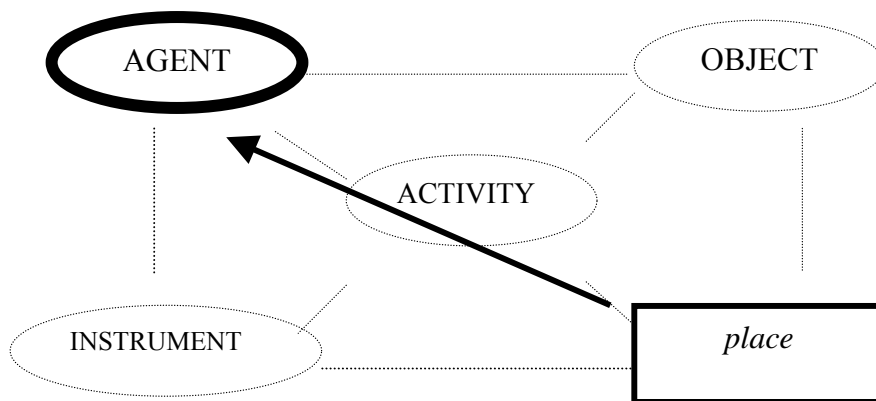
(27) AGENTS derived from INSTRUMENTS



(28) AGENT nouns derived from PLACE nouns

- |  |   |                                       |
|--|---|---------------------------------------|
| a. Engl. <i>garden-er</i>                            | < | <i>garden</i> Activity: WORK IN A G.  |
| b. Sp. <i>viña-dor</i> [vineyard:suff] ‘wine-grower’ | < | <i>viña</i> Activity: WORK IN A V.    |
| c. Germ. <i>Pförtner</i> [gate:suff] ‘doorman’       | < | <i>Pforte</i> Activity: STAND AT A G. |

(29) AGENTS derived from PLACES

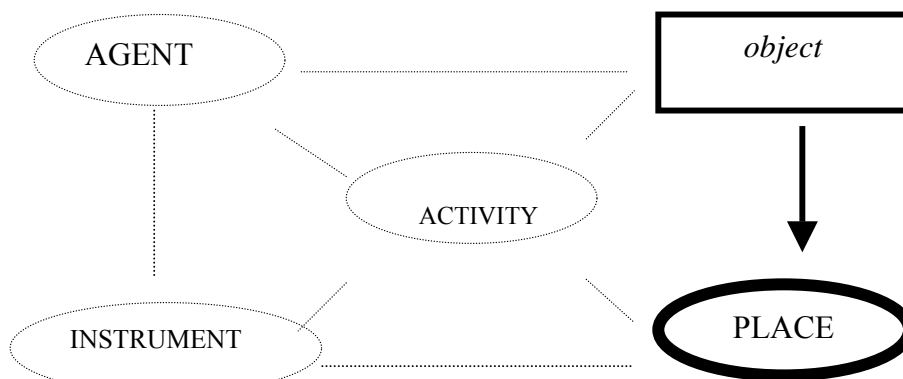


By the same token, PLACE nouns can be derived from the OBJECT of some ACTIVITY. Sometimes they are derived by means of a suffix which also serves to derive AGENT nouns.

(30) PLACE nouns derived from OBJECT nouns

- |   |                            |                   |
|---|----------------------------|-------------------|
| a. <i>basur-ero</i> [garbage:suff] ‘garbage dump’         | < <i>basura</i> ‘garbage’  | Activity:<br>DUMP |
| b. <i>cebad-ero</i> [oats:suff] ‘(animal-) feeding place’ | < <i>cebada</i> ‘oats’     | Activity:<br>FEED |
| c. <i>gallin-ero</i> [chicken: suff] ‘coop’               | < <i>gallina</i> ‘chicken’ | Activity:<br>KEEP |

(31) PLACES derived from OBJECTS

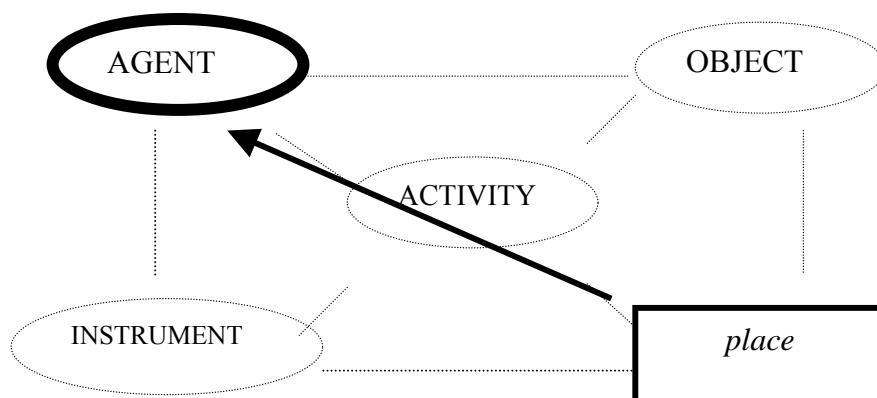


#### 4.2. Derived words which do not fit into the ACTIVITY Model

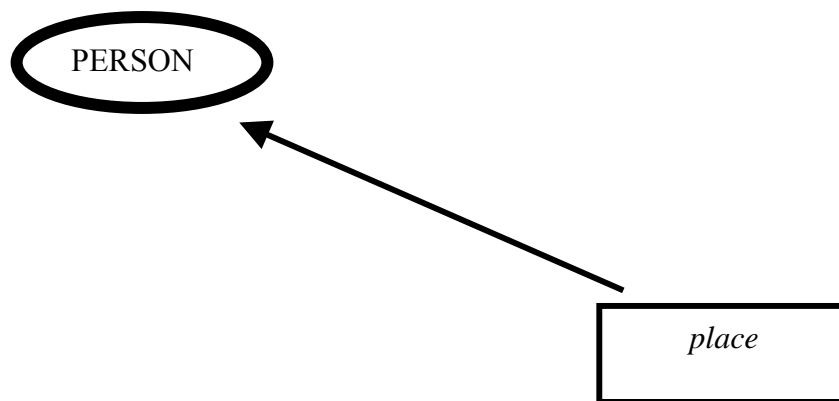
The ACTIVITY model is not the only frame type available for derivation (see Schwarze 1995:581-584), and in many cases, it does not even cover the totality of words built with a given nominalization suffix. Derivations which clearly do not fit into this model are, e.g., Germ. *er*-formations of the ablative type *Berliner* [Berlin: suff] ‘berliner, person from Berlin’,

*Ausländer* [foreign country: suff] ‘foreigner’ etc., i.e. nouns which refer to geographical origin, affiliation or other types of local contiguity (for discussion, see Beard 1990:124). Besides such cases, German *er*-formations serve to derive a host of words which only are in a very general metonymic HAS-DO-DO-WITH relationship with their base, e.g. *Viertürer* [four door: suff] ‘four-door model’, *Dreimaster* [three mast: suff] ‘three-master’ or *Paarhufer* [even hoof: suff] ‘even-hoofed animal’. The same observation holds for Sp. *-ero*, e.g. *brasileiro* [Brasil: suff.] ‘brasilian, person from Brasil’, *habanero* [(La) Habana: suff] ‘person from La Habana’ etc. The types of referents to which all these words refer are not related to any specific type of ACTIVITY. However, formations of this type have diachronically evolved out of the ACTIVITY model by metonymic change, or, to be more precise, by reanalysis based on metonymy. Thus, a *Pförtner* [gate: suff] ‘doorman’ is an AGENT engaged in an ACTIVITY which typically occurs at certain PLACES (namely STANDING AT some DOOR) – this interpretation makes the word *Pförtner* an instance of the ACTIVITY model (see reading A in (32a)). But by the same token, the meaning of *Pförtner* [gate: suff] ‘doorman’ could be interpreted more simply as a PERSON having to do with certain PLACES (that is, DOORS). In this case, the original ACTIVITY model interpretation, i.e. a very specific kind of metonymic relationship would be replaced by some very general metonymic understanding (X HAS TO DO WITH Y, see reading B in (32b)), and the reanalyzed *er*-word could then serve as a model case for new formations of the same type.

(32a) Reading A



(32b) Reading B



### 4.3. Diachronic change and synchronic rules in word formation

While for Germ. *-er*, a diachronic transition of the type illustrated in (32a, b) can only be hypothesized on purely speculative grounds, such a change is directly observable in the case of Sp. *-dor*. Recall that *dor*-nominalizations often can be used not only as nouns but also as adjectives (e.g. *un hablador* [a talk: suff] ‘a talkative person’ vs. *un tío muy hablador* [a guy much talk: suff] ‘a very talkative guy’, see above, section 2). A large and highly productive class of *dor*-adjectives contains the counterparts of INSTRUMENT formations in the adjectival domain. *Dor*-adjectives of this type denote EFFECTS normally produced by ACTIONS or ACTIVITIES. The adjective *alfabetizador* [teach-how-to-read-and-write: suff] (< *alphabetizar* ‘to teach how to read and write’), e.g. in *campana alfabetizadora* ‘literacy campaign, alphabetization campaign’, is originally interpreted as the EFFECT of some ACTIVITY intended to teach how to read and write. However, in more recent corpora of Spanish, one finds examples where such an EFFECT interpretation is impossible, e.g. *experiencia alfabetizadora* [experience teach-how-to-read-and-write: suff] ‘experience with alphabetization, experience concerning alphabetization’ (cf. Rainer 1993:451). A literacy campaign not only is a campaign with the EFFECT of an ACTIVITY intended to teach how to read and write, it can also be interpreted as a campaign which is SOMEHOW RELATED to teaching how to read and write. This second interpretation, based on a very unspecific metonymic relationship, prevails in the new and highly productive type of adjectival formations with *-dor*.

#### 4.4. “Irregular” derivation of thematic roles

The diachronic mechanism sketched in the last subsection can also explain a phenomenon which has intrigued syntacticians for a long time. In many languages, AGENT suffixes can be found in certain word formations which do not denote real AGENTS, but simply human participants involved in unspecific states of affairs which do not qualify as ACTIONS or ACTIVITIES, e.g. Engl. *the holder of this passport*, Germ. *der Verlierer dieser Geldbörse* ‘the loser [lose: suff] of this purse’, Sp. *el poseedor de esta llave* ‘the owner [own: suff] of this key’ (see Rappaport Hovav & Levin 1992:130-131, Meibauer 1995:100). Compared to ‘regular’ AGENT-formations, these cases are very rare, although they usually concern some highly frequent words. They have posed enormous problems to linguists who try to explain word-formation by rules of syntax, since these (few) cases require a formation rule which is substantially different from the derivation pattern underlying AGENT formations proper.<sup>10</sup> However, in light of the reanalysis account proposed in this section, they can be easily explained: an AGENT noun proper such as *painter* not only can be interpreted as an AGENT engaged in the ACTIVITY of PAINTING, but may equally be interpreted less specifically as a PERSON having to do with PAINTING. This interpretation may, in turn, yield the model for new NON-AGENT formations such as *owner*, *holder*, *loser* etc. This description is a diachronic explanation, not a synchronic rule. However, explanations of this type are more appropriate than syntax-like rules, since derivation is a phenomenon of the lexicon, not of syntax. Each and every item contained in the lexicon is the product of a language change, and must, at least in principle, be explained as a fact in its own right. Good diachronic explanations of newly derived words have to clarify what the models of these words are. In the most trivial case, such models are provided by lists of words already available to the speakers – the regularities underlying such lists may be described as productive rules. In other cases, like the ones considered here, these models only come into being by metonymic reanalyses of existing single words or word lists. This is why attempts to derive *all* the words formed with a given suffix by a single underlying *Gesamtbedeutung* (Beard 1990:120)

---

<sup>10</sup> These cases led to the assumption that there was an underlying function of (syntactic) ‘subjecthood’ common to both AGENT-nominalizations such as *baker* ‘person who bakes s.th.’ and NON-AGENTS of the type *owner* ‘person who owns s.th.’. This proposal also seemed to offer the advantage that it permitted to integrate INSTRUMENT formations which, according to this theory, are also derived from sentence-subjects, e.g. *grinder* ‘machine/device which grinds certain materials’ (for Spanish *dor*-formations, see Laca 1986:195-200, for Engl. *-er*, see Rappaport Hovav & Levin 1992:131, Keyser & Roeper 1984:395-396). Apart from the difficulties to explain the strong restrictions in the case of INSTRUMENT participants (see above, sections 1 and 3.3), these approaches regularly fail to integrate PLACE-derivations as well as all the cases of nominalizations which are not derived from verbal bases discussed in the present section.

normally fail: word formation patterns are not uniform rules, but overlapping family resemblances of word lists, linked to each other by metonymic relations.

## 5. Syntactic aspects of frame semantics

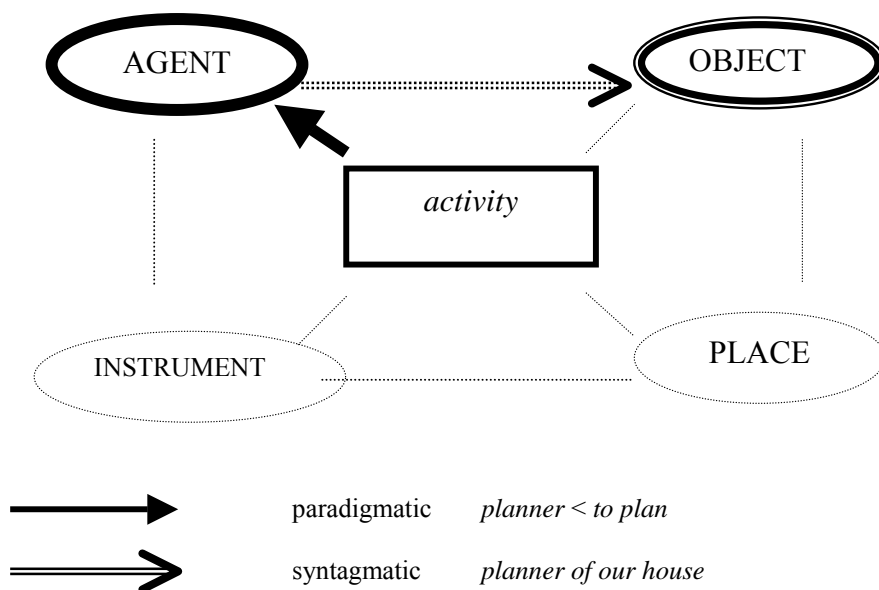
Valency configurations are *syntagmatic* concatenations of elements. Sentence (33a) contains a linear sequence of an AGENT, an ACTION and an OBJECT. The central element within this structure is the verbal predicate, i.e. the lexical expression of the ACTION, which in (33a) is explicitly asserted. Syntagmatic relationships are relations between elements which are actually realized, i.e. relationships “in praesentia”. In contrast, the relation expressed by derivation, e.g. by the word *planner* is *paradigmatic* in nature. In particular, the ACTION (or ACTIVITY) OF PLANNING in which the referent of the word *planner* is involved is not explicitly asserted, because at the time of utterance of (33b) or (33c) it may not be taking place. Hence, the derivation *planner* is not a linear concatenation of two elements “in praesentia”, but expresses a relationship between an actual referent (qualified as an AGENT) and a virtual ACTION, i.e. a relation “in absentia”. On the content level, this paradigmatic relationship is identical with the contiguity relation between the AGENT and the ACTION (or ACTIVITY). On the level of expression, it is overtly marked by the morphologically derived character of the word *planner*.

- (33) a. Peter planned our house.  
b. planner  
c. the planner of our house

In (34) syntagmatic (i.e., syntactic) and paradigmatic (i.e., morphological) relations are represented by different symbols.



(34) *The planner of our house*



### 5.1. The conceptual basis of nominal valency

The complex nominal *the planner of our house* in (33c) and (34) combines both the paradigmatic and the syntagmatic aspect discussed in the last subsection: on the one hand, its head *planner* expresses a paradigmatic relationship between AGENT and ACTION, while, on the other hand, the PP *of our house* is a syntactic complement which fills the slot of the OBJECT participant. Even though *planner* is not an event noun, but refers to an individual, it is nevertheless capable of taking the PP *of our house* as a syntactic complement. The reason for this is its narrow paradigmatic contiguity relation to the ACTION of PLANNING, central to the frame in question. Compare (35b) with (33c), repeated for convenience as (35a) here.

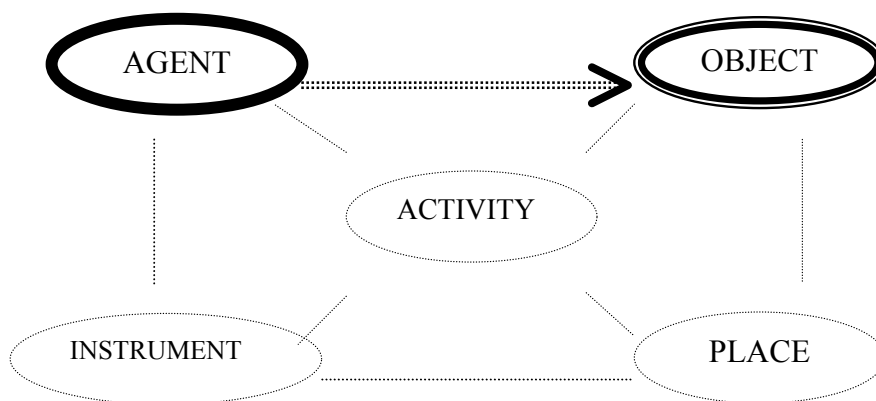
- (35) a. The planner of this house  
       b. The architect of this house

Trivially, an ARCHITECT is a PERSON habitually engaged in an ACTIVITY of PLANNING HOUSES. Hence, the concept of the ARCHITECT is embedded in frame relations which closely resemble those of the concept PLANNER, the main difference between both being the fact that an ARCHITECT is a PLANNER of very specific types of OBJECTS. The close contiguity to the ACTIVITY of PLANNING, which in turn is narrowly related to the OBJECT, explains why linguistic expressions of the concept ARCHITECT, e.g. Engl. *architect*, Sp. *arquitecto* or Germ. *Architekt* are normally capable of governing syntactic complements representing the OBJECT participant of the frame. Put more generally, the

capacity or incapacity of a word to govern arguments is a linguistic feature which depends on the conceptual proximity of its referent type to an ACTION or ACTIVITY.

While the sets of conceptual knowledge associated with the meanings of the words *planner* and *architect* are very similar, both words behave differently with regard to their respective morphological structure. Unlike *planner*, the noun *architect*, which is not morphologically derived, contains no overt indication of the associative relationship with the ACTIVITY of PLANNING, which is nevertheless contained in the conceptual structure associated with its meaning (see (36)).

(36) *The architect of our house*



It is obvious that the argument structure of the word *architect* is not inherited from any other word – it is entirely based on the world knowledge associated with its lexical meaning.

## 5.2. Nominal valency and conceptual proximity

AGENT or OBJECT nouns which, by virtue of their meanings, are closely related to ACTIVITIES can easily take each other as complements, even if they are not derived from verbs, e.g. *the author of this book* (see (37a)), *the book of this author* (37b), or simply *this author's book* (37c). In other words, the faculty of a noun to govern arguments is determined by the hierarchy (17), repeated in (17a) in a simplified form.

(17a) OBJECT > AGENT > INSTRUMENT > PLACE

AGENT participants, which, according to the hierarchy (17a), entertain looser relationships to specific ACTIONS than OBJECTS, are more naturally expressed as prepositional free adjuncts, e.g. Engl. *the book by this author* (see (37d)), Sp. *el libro por este autor*. The difference between (37a-c) on the one hand and (37d) on the other hand is that the different types of genitives in (37a-c) contain no indication as to the semantic role played by the

respective participant, whereas the preposition *by* in (37c) overtly specifies the AGENT function of the adjunct. Overt specification of a semantic relation only makes sense if this relation is not too easily inferable from world knowledge.

- |      |                                   |              |                    |
|------|-----------------------------------|--------------|--------------------|
| (37) | a. The author of this book        | Head: AGENT  | Complement: OBJECT |
|      | b. The book of this author        | Head: OBJECT | Complement: AGENT  |
|      | c. This author's book             | Head: OBJECT | Complement: AGENT  |
| ☞    | d. The book <i>by</i> this author | Head: OBJECT | Adjunct: AGENT     |

While the cases discussed in the last subsection are examples of words which possess argument structures in spite of not being morphologically derived from verbs, INSTRUMENT nominals represent the reverse case of morphologically derived words without argument structures. In light of the argument laid out here, this has nothing to do with restriction imposed on such formations by their base verbs. Rather, the reason for this restriction is the greater associative distance between the INSTRUMENT on the one hand and the ACTION/ ACTIVITY on the other. While not being an obstacle to the *morphological* derivation of INSTRUMENT nouns (see above, section 3.3), this distance prevents the INSTRUMENT from taking other nominals, e.g. OBJECT participants, as *complements* (see (35a)). The only way to realize such participants is by means of prepositional free adjunct constructions which explicitly mark the conceptual relationship between the INSTRUMENT and the OBJECT (see 35b).

- |      |   |               |                    |
|------|---|---------------|--------------------|
| (38) | a. *Ein <i>Schläger von</i> Tennisbällen        | *Head: INSTR. | Complement: OBJECT |
|      | ‘A <i>racket</i> [hit: suff] of tennis balls.’  |               |                    |
| ☞    | b. Ein <i>Schläger für</i> Tennisbälle          | Head: INSTR.  | Adjunct: OBJECT    |
|      | ‘A <i>racket</i> [hit: suff] for tennis balls.’ |               |                    |

## 6. In conclusion: what is argument inheritance?

The notion of derivation describes the fact that certain words entertain overtly marked relationships with other words (e.g. Engl. *planner* with the verb *to plan* and the noun *plan*). This morphological relationship is paralleled by associative links between the meanings of these words, which normally are related to the same frame. If this frame is an instance of the ACTIVITY model, all the meanings in question will be associated with the same ACTION or ACTIVITY. By virtue of this relationship, the words in question may exhibit similar argument structures. Hence, no argument is passed on from one word to another. Rather, argument “inheritance” is a metonymic effect based on the fact that morphologically related

words normally refer to contiguous portions of world knowledge. In particular, no reference is needed to a level of word-internal syntax.

As I have shown, conceptual knowledge is not contingent, but structured in recurring metonymic patterns (frames and scenes), which are reflected in certain types of linguistic structure, including (syntactic) valency and (morphological) derivation. The concept of argument inheritance captures the intuition that both techniques refer to the same frame-knowledge. At the same time however, it obscures the fact that derivation and valency serve different functional purposes and therefore present notable differences as to the fashion in which the frame knowledge in question is used linguistically.

## 7. Literature

- Beard, Robert (1990): "The nature and origins of derivational polysemy", in: *Lingua* 81, 101-140.
- Detges, Ulrich (forthcoming): "Vom Agens zum Instrument. Zur Geschichte der spanischen Wortbildungen auf *-dor*", to appear in: Krefeld, Thomas (ed.): *Sprachwandel und Sprachgeschichte*, Festschrift für Wulf Oesterreicher zum 60. Geb. Tübingen: Stauffenburg.
- Dressler, Wolfgang (1980): "Universalien von Agens-Wortbildungen", in: Brettschneider, Gunter (ed.): *Wege zur Universalienforschung*. Sprachwissenschaftliche Beiträge zum 60. Geburtstag von Hansjakob Seiler. Tübingen: Narr (= Tübinger Beiträge zur Linguistik. 145), 110-114.
- Ehrich, Veronika/Rapp, Irene (2000): "Sortale Bedeutung und Argumentstruktur: *ung-* Nominalisierungen im Deutschen", in: *Zeitschrift für Sprachwissenschaft* 19, 245-303.
- Fanselow, Gisbert (1988): "'Word syntax' and semantic principles", in: *Yearbook of Morphology* 1, 95-122.
- Fillmore, Charles (1977): "The case for case reopened", in: Heger, Klaus/Petöfi, János S. (edd.): *Kasustheorie, Klassifikation, semantische Interpretation*. Hamburg: Buske (= Papiere zur Textlinguistik. 11), 3-26.
- Gévaudan, Paul (1999): "Semantische Relationen in nominalen und adjektivischen Kompositionen und Syntagmen", in: *PhiN* 9, 11-34 [<http://www.fu-berlin.de/phin/phin9/p9t2.htm>].
- Gross, Gaston (1991): "Syntaxe du complément de nom", in: *Lingvisticae Investigationes* VI, 1-45.
- Gross, Maurice (1981): "Les bases empiriques de la notion de prédicat sémantique", in: *Langages* 63, 7-52.
- Heringer, Hans Jürgen (1984): "Neues von der Verbszene", in: Stickel, Gerhard (ed.): *Pragmatik in der Grammatik. Jahrbuch des Instituts für deutsche Sprache*. Düsseldorf: Schwann (= Sprache der Gegenwart. 60), 35-64.

- Jackendoff, Ray (1975): „Morphological and semantic regularities in the lexicon“, in: *Language* 51, 639- 671.
- Keyser, Samuel J./Roeper, Thomas (1984): “ On the middle and ergative constructions in English”, in: *Linguistic Inquiry* 15, 381-416.
- Koch, Peter (1999): “Frame and contiguity. On the cognitive bases of metonymy and certain types of word formation”, in: Panther, Klaus-Uwe/Radden, Günter (edd.): *Metonymy in Language and Thought*. Amsterdam/ Philadelphia: Benjamins (= Human cognitive processing. 4), 139-67.
- Laca, Brenda (1986): *Die Wortbildung als Grammatik des Wortschatzes. Untersuchungen zur spanischen Subjektnominalisierung*. Tübingen: Narr (= Tübinger Beiträge zur Linguistik. 286).
- Lees, Robert B. (1963): *The grammar of English nominalizations*. The Hague: Mouton.
- Levin, Beth/Rappaport, Malka (1988): “Nonevent *-er* nominals: a probe into argument structure”, in: *Linguistics* 26, 1067-1083.
- Lüdtke, Jens (1978): *Prädikative Nominalisierung mit Suffixen im Französischen, Katalanischen und Spanischen*. Tübingen: Niemeyer (= Beihefte zur ZRPh. 166).
- Marchand, Hans (1965): “On the analysis of substantive compounds and suffixal derivatives not containing a verbal element”, in: *Indogermanische Forschungen* 70, 117-145.
- Meibauer, Jörg (1995): “Wortbildung und Kognition. Überlegungen zum deutschen *-er*-Suffix”, in: *Deutsche Sprache* 23, 97-123.
- Olsen, Susan (1986): *Wortbildung im Deutschen. Eine Einführung in die Theorie der Wortstruktur*. Stuttgart:
- Olsen, Susan (1992): “Zur Grammatik des Wortes. Argumente zur Argumentvererbung”, in: *Linguistische Berichte* 137, 3-32.
- Panagl, Oswald (1978): “Agens und Instrument in der Wortbildung”, in: Dressler, Wolfgang U./ Meid, Wolfgang (edd.): *Proceedings of the Twelfth International Congress of Linguistics*, Vienna, August 28 – September 2, 1977. Innsbruck (= Innsbrucker Beiträge zur Sprachwissenschaft. Sonderband), 453-456.
- Paul, Hermann (1897): “Über die Aufgaben der Wortbildungslehre”, in: *Sitzungsberichte der Philosophisch-Philologischen und Historischen Classe der k.b. Akademie der Wissenschaften zu München*, 692-713.
- Rainer, Franz (1993): *Spanische Wortbildungslehre*. Tübingen: Niemeyer.
- Rappaport Hovav, Malka/Levin, Beth (1992): “ *-er* Nominals: Implications for the theory of argument structure”, in: Stowell, Tim & Eric Wehrli (eds.): *Syntax and the Lexicon*. San Diego & London: Academic Press (= Syntax and Semantics. 26), 127- 153.
- Ryder, Mary-Ellen (2000): “Complex *-er* nominals. Where grammaticalization and lexicalization meet”, in: Contini-Morava, Ellen/Tobin, Yishai (edd.): *Between Grammar and Lexicon*. Amsterdam / Philadelphia: Benjamins (= Current issues in linguistic theories. 183), 291-329.
- Sailer, Hansjakob/Lehmann, Christian (eds.) (1982): *Apprehension. Das sprachliche Erfassen von Gegenständen*. Part I: Bereich und Ordnung der Phänomene. Tübingen: Narr (Language universals series. 1/I).

- Sailer, Hansjakob/Premper, Waldfried (edd.) (1991): *Partizipation. Das sprachliche Erfassen von Sachverhalten*. Tübingen: Narr (Language universals series. 6).
- Schwarze, Christoph (<sup>2</sup>1995 [1988]): *Grammatik der italienischen Sprache*. Tübingen: Niemeyer.
- Staib, Bruno (1988): *Generische Komposita. Funktionelle Untersuchungen zum Französischen und Spanischen*. Tübingen: Niemeyer (= Beihefte zur ZRPh. 221).
- Szigeti, Imre (2002): *Nominalisierungen und Argumentvererbung im Deutschen und Ungarischen*. Tübingen: Niemeyer (= Linguistische Arbeiten. 449).
- Waltereit, Richard (1998): *Metonymie und Grammatik. Kontiguitätsphänomene in der französischen Satzsemantik*. Tübingen: Niemeyer (= Linguistische Arbeiten. 385).