

DEIXIS, REFERENCE, AND THE FUNCTIONAL DEFINITION
OF LEXICAL CATEGORIES

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This article provides a definition of lexical categories, that is, Noun, Adjective, Verb, Adposition, and Adverb, which complies with the descriptive (morphological) and explanatory (semantic) requisites for the establishment of the domains of the layered structure of the clause in functional theories of language, more specifically, in Functional Grammar and Role and Reference Grammar. In this sense, it is observed that the semantic properties of reference, attribution, and predication provide a definition of the categories Noun, Adjective, and Verb; the notions of prototypicality and semantic-syntactic domain are needed for the definition of adpositions; finally, for the Adverb a semantic analysis has to be made in terms of its pseudo-deictic and quasi-referential properties.

KEY WORDS: lexical categories, functional theories, reference, attribution, predication.

1. Introduction

The purpose of this article is to offer a definition of lexical categories that is compatible with functional theories of language like Functional Grammar, henceforth FG (Dik 1997a, b), and Role and Reference Grammar, hereafter RRG (Van Valin and LaPolla 1997). More specifically, we aim at defining the lexical categories Noun, Adjective, Verb, Adverb, and Adposition in such a way that: (i) the explanatory (semantic) requisites for the definition of the domains of the layered structure of the clause are satisfied; (ii) the descriptive (morphological) requisites for the definition of the lexical items of a dynamic functional lexicon are satisfied. Ultimately, we take a further step in the analysis of the level of the word (and, indirectly, the inflectional and derivational processes that the word undergoes), a task to which little attention has so far been given in theoretical frameworks of functional inspiration, and which seems unavoidable, given that the development of a morphological theory is at the core of the current linguistic debate both in the FG and the RRG community. Recent works in functional morphology include Bakker (2001) and Everett (2002).¹

1. It is not by chance that morphology is one of the main topics of the conferences on Functional Grammar (Gijón, September 2004) and on Role and Reference Grammar (Dublin, Ireland, July 2004).

This journal article is organized as follows. Section 2 defines the lexical categories Noun, Adjective, Verb, and Adposition by means of the semantic properties of reference, attribution, and predication. Section 3 is devoted to the Adverb, and pays special attention to the semantic properties of deixis and reference in time and place adverbs that may be predicative. The summary and conclusions of the article are offered in section 4. The language of reference and exemplification is English.

2. The functional definition of the Noun, the Adjective, the Verb, and the Adposition

The topic of the definition of categories has received uneven attention in the literature of functionalism: whereas functionalist authors like Foley and Van Valin (1984) and Hengeveld (1989) set the pace in the definition of grammatical categories as operators that attach at different levels of the layered structure of the clause, the definition of lexical categories was not a priority of functional theories of language until morphology was placed high on the agenda of theories like FG and RRG a few years ago. This position was coherent with one of the cornerstones of functional syntax, namely that syntactic categories are not maximal projections of lexical or functional heads, as in the Chomskian tradition. Even though functional models do not link headedness and category so explicitly as formal models (that is, syntactic categories in FG and RRG are not endocentric but exocentric), it is undeniable that lexical categories play a role in derivational morphology, which is usually defined, as in FG (Bakker 2001), for instance, as involving some degree of transcategorization (Dik 1997a: 196). Moreover, one of the basic explanatory distinctions of RRG is head-making vs. dependent marking, which obviously involves the notion of headedness, categories being, at least partially, related to headedness. Therefore, from the perspective of morphology and syntax, it is high time the question was addressed of how to define lexical categories in a way that is suitable for the development of a theory of functional morphology.

In FG, which has engaged in the discussion of lexical categories more deeply than RRG, all lexical items of a language (the Noun, the Verb, and the Adjective, in Dik's view) are analysed as predicates (Dik 1997a: 54). The descriptive consequence of this claim is that the FG lexicon includes a category label in the information provided by the predicate frame of each lexical item. Mackenzie (2001) enlarges the inventory of lexical categories to include the Adverb and the Adposition, which has the same impact on lexical description as the inclusion of the other lexical categories. Mairal and Cortés (2002) consider derivational affixes lexical elements and, consequently, represent them in the lexicon as full predicates. Throughout this article the stance on the definition of lexical categories is that they constitute not only descriptive labels but also explanatory resources of the theoretical apparatus of a functional grammar.

In order to define lexical categories, it is necessary, to begin with, to distinguish them from grammatical categories in such a way that notional and heavily theory-dependent definitions are avoided. By *notional* definition of categories we mean, for instance, Givón's, for whom:

The cluster of experiential features that are typically coded as nouns tend to be relatively *complex* (multi-featured), *concrete* (physical), *compact* (packed together in space). Above all,

they are *time-stable* (slow-changing) . . . The experiential phenomena typically coded as adjectives tend to be relatively *simple* (single-featured) attributes of prototypical nouns; that is, *inherent, concrete, time-stable qualities* . . . The experiential phenomenon typically coded as verbs tend to be of intermediate complexity, involving concrete (perceptually accessible) *events*, either of physical *motion* or physical *action*, and, above all, fast changing *events*. (1993 1: 54; emphasis as in the original)

In this sense, it is interesting to compare the proposal by Croft (1991: 62), who argues that the prototypes of the categories Noun, Verb, and Adjective can be derived from four characteristics: valency (inherent relations), stativity (aspectual distinctions between states and processes), persistence (how long the process or state is likely to last over time), and gradability (the concepts can or cannot be manifested in degrees). Along this line, Baker (2003: 293) criticises notional definitions of categories because, according to this author, “The lexical category distinctions correspond not so much to ontological distinctions [event/thing/property] in the kind of things that are out there in the world, but rather to the different perspectives we can take on those things, the different ways our linguistic capacities give us of describing them.” Baker (2003) puts forward a definition of categories that modifies the classical procedure of syntagmatic description used in the generative tradition:

(1) X-Bar Theory	Baker (2003)
N = +N -V	N = +N >has a referential index=
V = -N +V	V = +V >has a specifier=
Adj = +N +V	Adj = -N -V
Prep = -N -V	Prep is a functional category

In our opinion, Baker’s (2003) X-bar-based theory of categories is a strongly *theory-driven* proposal, since it relies on concepts and procedures, such as *referential index*, that do not have a correlate in other linguistic theories. It seems necessary, therefore, to avoid extreme semanticism (as in Givón 1993) and extreme syntacticism (as in Baker 2003), and to offer a definition that, capturing the subtleties of the semantics and the syntax implied, may be shared at least by the linguistic theories of a structural-functional persuasion.

Our proposal, in a nutshell, involves taking the behaviour properties of categories into account: combination and distribution. This proposal, as we have just remarked, calls in the first place for a distinction between lexical and non-lexical categories. Categories fall into two types: lexical categories and grammatical categories. It is a central property of *lexical* categories that they combine with other lexical categories to give rise to semantic-syntactic units like phrases, clauses, and sentences. It is a central property of *non-lexical* or *grammatical* (we avoid the term *functional*) categories that they distribute across other grammatical categories and across lexical categories to form paradigms. Instances of adjectival collocation and verbal complementation like (2.a) and (2.b) respectively illustrate lexical category distribution; determiners, as in (2.c), and agreement, as in (2.d), respectively, illustrate grammatical category distribution:

- (2) a. canned / fresh /ripe / unripe / tropical fruit
 b. to confess to a crime / to the police / that one has lied
 c. the / this coin (*the this coin)

This distinction discriminates clearly between the group of Noun, Adjective and Verb on the one hand, and the group to which articles, demonstratives, etc. belong, on the other hand. Moreover, this distinction is coherent with the formal representation of the RRG layered structure of the clause (Van Valin and LaPolla 1997) and the FG hierarchical structure of the clause (Dik 1997a, b). In both representations of the syntax-semantics of the clause, which, ultimately, draw on Foley and Van Valin (1984), the elements that contribute lexical meaning are treated in a different way from those that contribute grammatical meaning: lexical elements take up constituent positions whereas grammatical elements are operators with scope over one or more subconstituents or constituents.

This suggests that the key criterion in the definition of a grammatical category is that it displays distributional (mainly paradigmatic) properties; and that the key criterion in the characterization of a lexical category is that it shows combinatory (mainly syntagmatic) properties, that is, complementation and collocation properties, in such a way that the entry for a member of a given lexical category stipulates the quantitative and qualitative valency of the element. Although the criteria of combination and distribution draw a distinction between grammatical and lexical categories, the borderline cases in the classification of categories, as was predictable, are the Adposition and the Adverb.

Considering the Adposition in the first place, some authors like Croft (1991) or Baker (2003) deny the Adposition the status of lexical category. Croft (1991: 144) states that adpositions resist a functional definition like the one that can be put forward for nouns, adjectives, and verbs. Baker (2003: 303ff), while admitting that adpositions “are fewer in number and poorer in lexical semantic meaning than the average lexical category, as well as greater in number and richer in meaning than the average functional category,” points out that adpositions constitute a closed class and do not take part in derivation and incorporation.

In terms of combination and distribution, the Adposition combines with, at least, the lexical category Noun and distributes across, at least, the lexical category Verb. RRG captures this distinction on the grounds of predication. Van Valin and LaPolla (1997: 52) point out that adpositions that license their object, function as predicates and typically occur in the periphery of the clause, like those in (3.a), are predicative adpositions; and adpositions that do not license their object and typically introduce oblique core arguments, like those in (3.b), are non-predicative adpositions:

- (3) a. sleep in the bedroom / on the floor / at the rear door
 b. approve / consist / deprive of something

The existence of predicative and non-predicative adpositions reinforces our proposal in favour of a lexical category Adposition with combinatory (nominal) properties and distributional (verbal) properties. The case with the Adverb is rather the opposite: the Adverb neither combines with lexical classes (in the sense of entering complementation or collocation patterns) nor distributes across them.² It is probably for this reason that the

2. The only exception to the statement that the Adverb neither combines with lexical classes nor distributes across them might be intensifiers like *very* or *extremely* and mitigators like *hardly* or *scarcely*, which modify adjectival heads like *visible* (as in *a hardly visible token*) but not like *polar* (as in **a scarcely polar bear*).

Adverb is a firm candidate for dropping out of the lexical category inventory. Dik (1997a: 194), for example, distinguishes three classes of predicates (nominal, adjectival and verbal predicates), which are defined functionally: nominal predicates are heads of term phrases, adjectival predicates perform an attributive function and verbal predicates have a predicative function. Hengeveld (1992, 1997) and Mackenzie (2001) have argued for a fourth category, the Adverb.

As we see it, there are syntactic and semantic reasons for regarding the Adverb as a lexical category. Considering the syntactic aspects first, Mackenzie (2001: 127) has pointed out that the category Adverb must be identified within the English lexicon because there are at least two classes of adverbs that can be used predicatively, namely place and time adverbs. This is illustrated by (4):

- (4) a. The conference is *here*
b. The conference is *tomorrow*

As can be seen in (4), *here* and *tomorrow* function as the predicates of the clause, and they are represented as such. This, however, is not possible with other types of adverb, as is shown by (4) with respect to the manner adverb *quickly*:

- (5) a. She walks *quickly*
b. *She is *quickly*

Besides all this, Hengeveld (1997: 134) remarks that, whereas all adverbial classes tend to occupy fixed clausal positions, place and time adverbs occur more freely in the linear order of the clause. This is shown by (6):

- (6) a. *Yesterday* the students sat their final exam
b. The students sat their final exam *yesterday*
c. The students sat their final exam *there*
d. *There* the students sat their final exam

If the reasoning is correct, the descriptive labels to be included in a dynamic functional lexicon of English for lexical categories are Noun, Adjective, Verb, Adverb, and Adposition. Our analysis in terms of combinatory and distributional properties has demonstrated that the Noun, the Adjective, and the Verb constitute central (or *prototypical*) lexical categories, whereas the Adposition and the Adverb represent peripheral (or *less prototypical*) lexical categories. In the remainder of this article, we focus on the function of the lexical categories we have just identified, with special emphasis on the function of the Adverb.

We have begun this article by discussing lexical categories as descriptive devices, not explanatory ones. Lexical categories are descriptive labels necessary for accounting for, at least, inflectional and derivational morphology. This is not to say, however, that lexical categories do not perform a function. They do perform a function when they are used in discourse. FG and RRG agree in recognizing the explanatory status of lexical categories when they are inserted into the slots of larger semantic-syntactic units like phrases, clauses, and sentences. In other words, lexical categories constitute a descriptive device in morphology and an explanatory device in syntax, semantics, and pragmatics. In the best tradition of functional theories, the function of categories represents a primitive notion of

semantic and syntactic theory whereas the descriptive label of categories represents a derived notion, dependent on the definition of the primitive notion. This is consistent with the labels and functions of phrases in functional theories: semantic-syntactic units have categorial labels such as NP or Term Phrase and perform functions like Argument.

This approach to the function of categories raises the previous question of what is the relationship between the category of the non-dependent lexical word and the category/function of the syntactic unit in which the non-dependent lexical word is inserted. The relationship between the category of the word and the category and function of the phrase can be endocentric or exocentric. These terms were originally coined by Bloomfield (1933), who drew a distinction between endocentric and exocentric constituents. An endocentric constituent is one whose distributional privileges as a constituent are the same as those of its head alone, as is the case with the Noun and the Noun phrase in English. An exocentric constituent is one whose distribution is different from that of its head, as is the case with the Adposition and the Adpositional Phrase in English (see Matthews 1993: 155–58 for more information). In what follows, this terminology is used somewhat differently. Functional theories do not favour endocentric semantic-syntactic categories (phrases) which consist of a structural description of a head with a complement and a specifier in which the category of the head determines the category of the phrase. On the contrary, functional theories have adopted an exocentric conception of phrases, which consist of a structural-functional description of a nuclear element and its dependents in which the discourse function of the nuclear element determines the category of the phrase; and in which the discourse function of a given category may vary depending on the context.

The definition of the discourse function of lexical categories as belonging to exocentric semantic-syntactic units runs as follows. The starting point is that, prototypically, nouns have the property of reference, adjectives have the property of quality or relation, and verbs have the property of predication: the function of the lexical category Noun is to make reference in the noun phrase; the function of the lexical category Adjective is to attribute a property in the noun phrase; and the function of the category Verb is to predicate in the clause. This is tantamount to saying that, prototypically, the lexical category Noun is attached to potentially referential predicates; the lexical category Adjective is attached to potential modifiers; and the lexical category Verb is attached to predicative lexical items.

As for the Adposition, it is a phrasal predicator, both as a syntactic marker of the semantic function of the phrase (more prototypically) or a morphological marker of verbal government (less prototypically). This is shown by the following examples:

- (7) a. To jump at/in/to/from the corner
b. To consist of something

So far so good, but the Verb shares with the Noun, the Adjective and the Adposition the property of predication. This is illustrated by the following examples:

- (8) a. Sheila is a dentist
b. Theo was green with envy
c. The customer is waiting at the entrance

Indeed, in non-verbal predications the possibility must be left open that Nouns, Adjectives, and Adverbs are used predicatively (Hengeveld 1992: 37). We discuss the Adverb in the following section. As regards the other lexical categories, it follows that, in order to provide fully distinctive definitions, additional properties or notions are required. We propose to resort to the notions of prototypicality and semantic-syntactic domain.

The notion of prototypicality motivates the difference between the Adposition and the Noun. The Adposition is prototypically predicative and less prototypically non-predicative, whereas the Noun is prototypically referential and less prototypically predicative. The notion of semantic-syntactic domain motivates the difference between the Adjective and the Adposition. The Adjective is predicative at clause level and attributes properties at phrase level, whereas the Adposition is predicative at phrase level.

3. The functional definition of the Adverb

As pointed out in the previous section, the semantic properties involved in the functional definition of the lexical categories Noun, Adjective, and Verb are, respectively, reference, modification, and predication. We also remarked in section 2 that predication is a semantic property relevant for the definition of the other categories apart from the Verb, in particular the Adposition. In this section we engage in the discussion of predicative adverbs and explore this question in the light of more specific semantic properties for which we coin the terms *pseudo-deixis* and *quasi-reference*.

Hengeveld (1992, 1997) and Mackenzie (2001) agree that place and time adverbs can be used as predicates, that is, they can be inserted into the head position of a term phrase, thus acquiring a referential value. These authors, however, differ as to the semantic properties of such adverbs of place and time: Hengeveld considers them “deictic” (1997: 134), while Mackenzie (2001: 127) regards them as “denotative.” For this reason, it seems necessary to pay attention to the question of deixis, denotation, and reference from the angle of place and time adverbs (on reference, see Keizer 1992 and Mackenzie 1992).

Deixis implies pointing. Deixis is defined by Lyons as “identification of the referent by means of some bodily gesture on the part of the speaker” (1996: 303). If this is interpreted literally, the unmarked realization of deixis is involved: the zero point of deixis is *here* and *now*. With respect to the marked realization, deixis can refer to a place and time that do not coincide with the moment of speaking. In that case, there is more abstraction at the level of identification of the referent, but there is still deixis. The only difference is that more specific linguistic communication is needed in order to situate the referent, instead of general communication. When more specific linguistic communication is preferred, speakers use place and time adverbs or demonstrative adjectives and pronouns so as to situate the referent in its proper spatial and temporal parameters. Note that some authors, like Halliday and Hassan (1976: 38), prefer the term *demonstrative reference* to account for the function of demonstrative adjectives like *this*, *these*, *that*, and *those*, and demonstrative adverbs like *here*, *there*, *now*, and *then*.

Prototypically, deixis is a property of noun phrases: entities tend to be fully specified, that is, both determined and modified. Of the two dependent functions of the noun phrase, the determiner is virtually compulsory, whereas the modifier is optional (Langacker 1991: 145). Among determiners, demonstratives are of paramount importance,

since they contribute to the basic spatial and temporal features of the term phrase. This is illustrated by the examples in (9):

- (9) a. *This* book (not *that* one)
 b. *Those* tapes (not *these* ones)

As can be seen in (9), the demonstrative adjectives *this*, *that*, *those*, and *these* contain semantic components related to orientation. More specifically, they address at a distance. Thus, prototypically deixis is expressed through demonstrative adjectives and pronouns, which attribute deictic features to noun phrases. Less prototypically, deixis is expressed through adverbials, which attribute locational features to the clause as a whole: the adverbs *here* and *now* contribute the basic spatial and temporal features of the clause. This is shown by (10):

- (10) a. The envelop is *here* (not *there*)
 b. *There* goes the bus (not *here*)
 c. It is raining *now* (not *then*)
 d. *Then* the roof collapsed (not *now*)

At this point, it should be noted that, comparing space and time, deixis is primarily spatial and only secondarily temporal. On the time axis, deixis operates by analogy with the space axis, time being a more abstract concept than space (Lyons 1977, 1996): the temporal point is a metaphorical space point, in such ways that *here* and *now* coincide, as *there* and *then* do.

The assessment of the degree of prototypicality of noun phrase deixis and clause deixis has been carried out in terms of the level of abstractness of the logical operation of identification: it is possible to point at (at least some) term phrase referents, like *books* or *tapes*, but the identification between an activity like *be raining* or an event like *a roof collapsing* and a certain spatial and temporal setting is much more abstract: bodily gestures are less self-explanatory in this case. Consequently, whereas it is possible to speak of deixis proper in noun phrases, it seems more accurate to speak of pseudo-deixis in clauses. Pseudo-deixis, in consequence, is a property of certain adverbials that resemble noun phrases in that they can be used deictically and that resemble adverbials in that they provide additional locative and temporal features.

Empirical evidence in favour of this view is provided both by the morphology and the semantics of English. As regards morphology, different lexical classes are involved in deixis and pseudo-deixis: deixis makes use of demonstrative adjective and pronouns whereas pseudo-deixis requires adverbs. If the functions are considered, noun phrase deixis demands operators while clause deixis calls for adverbials. As far as semantics is concerned, Lyons (1977: 442–47) distinguishes three orders of entities, the first two of which are relevant here: predicates represent first-order entities, which can be located in space and can be evaluated in terms of their existence; and second-order entities, which can be located in space and time and can be evaluated in terms of its reality. In example (10), *the roof* constitutes a first-order entity, or spatial entity; *the roof collapsing* represents a second-order entity, or spatial and temporal entity. It seems to be the case, therefore, that deixis proper is a characteristic of prototypical noun phrases (the ones that make reference to

first-order entities) whereas pseudo-deixis is a characteristic of clauses, which code states of affairs.

Let us centre on reference now. The first question at stake is what the relationship between reference and denotation is. Both semantic functions relate linguistic entities to non-linguistic ones by identifying the members of a certain class. Although there are several differences between denotation and reference, for our purposes here it is enough to state that the term *reference* is preferable to *denotation* when dealing with place and time adverbs because the term denotation is context-independent whereas the term reference is context-dependent. Moreover, denotation can be broken down into an extensional component (identifying a class of entities) and an intensional one (identifying a defining property of a class of entities). As to adverbs of place and time, it is not obvious how the extension and the intension of these adverbial subclasses can be defined.

Both deixis and reference are prototypically functions of the noun phrase. As regards the differences between one and the other, a basic distinction between deixis and reference is that deixis is situational whereas reference is contextual. Both perform an orienting function. However, orienting serves two purposes: situating and linking. Situating is proper of predicates, while linking has referring properties: it refers. In other words, the context of an utterance is relatively independent of the situation in which the utterance takes place. Reference is basically contextual. It follows the linear sequence of discourse, as is easily demonstrated by the way in which articles distribute with nouns in the first and subsequent mentions of a given referent. This is shown by (11.a):

- (11) a. Yesterday I saw *a tiger* . . . *The tiger*
 b. *This* is the one I prefer. *This one* is compact whereas *the other one*...
 c. *That* is the one I prefer. *That one* is compact whereas *the other one*...

As (11.b) illustrates, deixis is situational. If the situation changes, the coding of deixis is modified, as (11.c) shows with respect to (11.b). Put another way, deixis is relatively dependent on the situation in which the utterance takes place. This is undoubtedly associated with the fact that both deixis and pseudo-deixis make use of mutually-exclusive pairs, namely demonstrative adjectives and pronouns, personal pronouns, and the adverbs *now*, *then*, *here*, and *there*. Deixis and reference differ in this respect in the type of membership of the lexical categories just mentioned: deixis requires closed-class categories (recall example 3 for illustration). Reference, on the other hand, gives way to members of open-class categories: reference proper requires nouns; quasi-reference, on the other hand, requires adverbs that belong to closed inventories. It must be hinted that we take all the members of adverbial subcategories to constitute closed classes, with the exception of the ones ending in the productive suffix *-ly*. For more information on this question, we refer the reader to Samuelsdorff (1998).

Apart from the characteristics of reference already discussed, it remains to be said that reference can be classified into reference proper and quasi-reference. Reference proper is a property of noun phrases: once nominal predicates have been inserted into the semantic-syntactic domain of the noun phrase, the noun phrase acquires referential properties, that is, it refers to an entity of any possible world. Prototypically, speakers refer to concrete referents of the physical world. Less prototypically, abstract referents of real or fictional worlds can be referred to by noun phrases.

Quasi-reference is a property of certain adverbials that resemble noun phrases in that their head is quasi-nominal and that resemble satellites in that they provide additional locative and temporal features. Quasi-referential adverbs of place and time do not come in logically-exclusive pairs, as is the case with the pseudo-deictic adverbs *now*, *then*, *here*, and *there*, mentioned above. This is the case with the adverbs in (12):

- (12) a. upstairs, abroad, aboard
b. yesterday, today, tomorrow

A remarkable point of contrast with deixis is that deixis is more spatially-oriented, whereas quasi-reference is more temporally-oriented. Empirical evidence for this statement comes from lexical availability and syntactic distribution. Regarding lexical availability, there are more lexical items available for coding temporal quasi-reference than there are for coding spatial quasi-reference. There are, to begin with, no place correlates of *yesterday*, *today*, and *tomorrow*.³ This comes as no surprise, since time, as has already been remarked, is a much more abstract category than place. The linear sequence in terms of which time is understood, at least in Western thought, consists of a series of tokens, all of which are identifiable with reference to the previous and the subsequent token, thus *yesterday* (or *the day before today*), *today*, and *tomorrow* (or *the day after today*). By extension, other temporal expressions could be considered here, but they qualify as less prototypical since structurally they are nominal beyond a doubt:

- (13) a. last week, this week, next week
b. last month, this month, next month
c. last year, this year, next year
d. etc.

Indeed, these expressions include a determiner, unlike less clearly nominal ones such as *today*, which admit neither determination nor modification. Regarding distributionality, quasi-reference is more temporally-oriented because time adverbs distribute more freely in term phrases than place adverbs. Although both appear in postmodification, the tendency is for time adverbs only to appear in premodification:

- (14) a. *Tomorrow's* talk
b. *Yesterday's* demonstration

It has already been remarked that different lexical classes are preferred depending on the semantic-syntactic layer that is involved: prototypically, adjectives are favoured as modifiers in the noun phrase and adverbs in the clause. Non-prototypically, adverbial restrictors appear in the noun phrase. It could be argued, however, that both in (14.a) and (14.b) we are dealing with a noun phrase that embeds a state of affairs, hence the paraphrases in (15):

- (15) a. There is a talk *tomorrow*/
The talk that takes place *tomorrow*

3. In trinary demonstrative systems, like that of Early Modern English, the third demonstrative means *neither here nor there, but away from speaker*.

- b. There was a demonstration *yesterday*/
The demonstration that took place *yesterday*

The analysis that recognizes a lexicalized state of affairs is consistent with Lyons's (1977) remark that states of affairs can be located both in space and time, whereas predicates can only have spatial reference. This is illustrated by the following pairs of examples:

- (16) a. The lecture *downstairs*
b. Someone is delivering a lecture *downstairs*
c. *Tomorrow's* lecture
d. Someone is delivering a lecture *tomorrow*
e. The door *downstairs*
f. There is a door *downstairs*
g. *The door *tomorrow*
h. *There is a door *tomorrow*

Examples (16.a), (16.c) and (16.e) constitute noun phrases, formally speaking. Therefore, it can be argued that non-prototypicality stems from a mismatching between form (noun phrase) and function (predication) In FG terms, a derived construction is involved that demands some degree of formal adjustment. See Dik (1997a: 428; 1997b: 158). Moreover, there seems to be a strong correlation between the presence of adverbial restrictors and the predicative nature of the noun phrase. These pairs of examples also show that the point of contact between deixis and quasi-reference is position: the adverbials of place used with a quasi-referential value qualify as locatives, never as directionals. The analogy with time is easy to establish: the time of the utterance is always the present, which implies a very specific token along the line of time.

4. Summary and conclusions

This journal article has defined the lexical categories Noun, Adjective, Verb, Adposition, and Adverb by taking into account the descriptive and explanatory requisites of functional theories of language. As regards description, lexical categories have been addressed as descriptive labels relevant for transcategorization. As for explanation, the discourse function of categories has been considered.

The semantic properties of reference, attribution, and predication provide a definition of the categories Noun, Adjective, and Verb. If the Adposition is regarded as a lexical category, other notions like prototypicality and semantic-syntactic domain are required so as to define the lexical category Adposition. Moreover, if the Adverb is granted lexical category status, a fine-grain semantic analysis by means of properties like pseudo-deixis and quasi-reference is required in order to define this lexical category.

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