PREPOSITIONS AS A SEMILEXICAL CATEGORY

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Abstract: The status of the category P(reposition) has been the topic of several analyses in the last few decades. The goal of this presentation is to propose an analysis of prepositions in terms of semilexical features. Additionally, we shall take a closer look at the distinction between lexical and functional prepositions.

Keywords: preposition, lexical, functional, semilexical, category

1. Introduction

The status of the category P(reposition) has been the topic of several analyses in the last few decades.

Lexical analyses. In the classical approach of generative grammar (Jackendoff 1973, Chomsky 1981, Rizzi 1988), it is assumed that prepositions are a lexical category (projecting a prepositional phrase) characterized by the features [–N, –V], and an assigner of inherent case. On the other hand, within the same framework, only categories characterized by at least one positive value of the features N and V are purely lexical (cf. Déchaine 1993, Zwarts 1997). Recent developments draw parallels between PP and VP, considering that prepositions have a functional projection *light p*, similar to *light v* (van Riemsdijk 1990, Svenonius 2006), or that prepositions have a functional structure similar to T (Koopman 2000, Den Dikken 2003).

Functional analyses. Contrary to these proposals, a number of alternative approaches have included (at least some) prepositions in the extended projection of the noun (Abney 1987, Grimshaw 1991 and 2005) and analyzed them as Case (a.o., Fillmore 1968, Emonds 1985, Asbury 2005, Gorrie 2008, Geană 2010). Put differently, there might be instances of prepositions that are not lexical in nature, but rather functional.

Towards a hybrid analysis. This paper argues for a hybrid analysis of prepositions (cf. Zwarts 1997, Corver and van Riemsdijk 2001, Mardale 2009, Geană 2010). More precisely, we will consider that the category P is a **semilexical** one, which means that it has lexical and functional properties at once. We will also assume that the category P is a (very) **heterogenous** one (Pană Dindelegan 1997 and 2003, Gaatone 2007). Among its members, we may distinguish between (at least) two subclasses: (i) a (more) **lexical** one, and (ii) a (more) **functional** one.

In what follows, we will examine the prepositions on the basis of certain formal (i.e. theoretical) and empirical criteria.

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2. Formal criteria for the analysis of prepositions

2.1 Lexical versus functional categories. Extended projections

The terms lexical and functional are traditionally defined as being complementary and discrete. This is to say that if a category is not lexical, then it is functional. Conversely, if a category is not functional, then it is lexical.

Formal grammars represent this dichotomy in terms of the presence vs. absence of the feature F (for functional). When F is positive (i.e. [+F]), we are dealing with a functional category. On the contrary, when F is negative (i.e. [−F]), we are dealing with a lexical category.

Since Grimshaw (1991, 2005), the feature F is defined as being independent of categorial features. In other terms, F is an additional feature that may appear in the matrix of a lexical category. More precisely, lexical categories display a third feature carrying a negative value, i.e. [−F][1]. Moreover, it is assumed that lexical categories may have extended projections corresponding to the projections of their different functional categories (D, Deg, I, C). The last ones differ from the pure lexical categories with respect to the presence of the positive value in F, i.e. [+F], that they trigger as a result of specific properties. Concretely, language categories may be defined from a formal perspective as follows:

(1)   *Lexical Categories*
         a.   N   [+N, –V, –F]
         b.   V   [–N, +V, –F]
         c.   A   [+N, +V, –F]
(2)   *Functional Categories*
         a.   D   [+N, –V, +F]
         b.   Flex, C   [–N, +V, +F][2]
         c.   Deg   [+N, +V, +F]

As can easily be observed, these two paradigms display a very clear formal parallelism: all categories associate in pairs, (1a) and (2a), (1b) and (2b), (1c) and (2c).

In fact, this observation represents the hypothesis on which is based the theory of extended projections (see Grimshaw 1991 and 2005). Accordingly, an extended projection must display the features of the lexical category which it extends. In other words, a functional category does not change the nature of an extended lexical category, but only its projection level. For instance, nominal phrases displaying a determiner (DPs) are still nominal projections being headed by a category which is not the noun itself. Correlatively, inflected verbal phrases (IPs or CPs) are still verbal projections being

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[1] Grimshaw uses a different symbol in order to refer to a negative value of F, namely [F0]. For clarity, we decided to use the same symbols as when we have defined lexical categories, i.e. the symbols "+ " and "–".
[2] Such as represented here, the categories Inf land C appear to be identical. In order to avoid this unwanted identity, Grimshaw proposes to insert within their matrix two different F features: [F1] for Infl and [F2] for C (see also the paradigm given in (5) below).

headed by categories that are not the verb itself. The same may be said about adjectives with respect to their extended projection, the DegP[3].

Accordingly, the definition of functional categories may be conceived in terms of functions that may apply to lexical phrases in order to generate extended projections. For instance, determiners (definite or indefinite article) may combine with a nominal phrase (NP) in order to generate a definite or indefinite determiner phrase (DP). Similarly, inflectional morphemes may combine with a verbal phrase (VP) in order to generate an inflectional phrase (IP). The latter may additionally combine with a complementizer (C) (e.g. Rom. *că* / Engl. *that*) in order to generate a complementizer phrase (CP). Finally, the degree morphemes (Deg) may combine with an adjectival phrase (AP) in order to generate degree phrases (DegP).

Note that these operations are not arbitrary. They concern only the categorial pairs having compatible features. Put differently, the determiner may combine with a nominal phrase because they both display the (common) features [+N, −V], but it could not combine with a verbal phrase because of their different features ([+N, −V] vs. [−N, +V]). We may argue in the same way with respect to verbal and adjectival inflectional morphemes.

This comparative characterization of lexical and functional categories leads to the following generalization, adapted from Zwarts 1997: 11):

(3) a. Members of a lexical category display at least one of the features [+N] or [+V] ;
     b. Members of a functional category display the feature [+F].

As it is formulated in (3), this generalization has at least one consequence, namely that the categories D, I, C and Deg appear to be equally lexical, since their matrix display one of the features [+N] or [+V], cf. (3a).

In order to avoid this unwanted result, Zwarts (1997) proposes an analysis of functional categories as functions ("formal devices", in his terms) that may apply to domains (i.e. to arguments) displaying one of the features [+N] ou [+V]. In other words, functional categories do not have themselves the features [+N] or [+V], rather the arguments (i.e. their domains) they combine with do. In the reminder of this paper, we adopt Zwart's proposal and represent it as follows:

(4) a. D   [F ([+ N, −V])]
     b. Flex, C   [F ([−N, +V])]
     c. Deg   [F ([+N, +V])]

Accordingly, D, I, C and Deg are no more analysed as lexical categories, only the domain they are applying to is.

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[3] This idea is already present in the classical framework of Principles and Parameters (Chomsky 1981), at least for verbal categories (i.e. V, I, C). The difference is that – within this framework – functional categories are not considered as extended projections of lexical categories (as proposed by Grimshaw (1991 and 2005), but rather as Specifiers or Modifiers of lexical categories.

In what follows, we shall examine prepositions in the light of the **extended projection** notion.

2.2 Prepositional phrases as extended projections of the nominal phrase

In the previous section, we have highlighted several times the fact that prepositions have a specific statute with respect to the other categories: **they may not be analysed either as lexical or as purely functional**.

However, as we shall see in section 3 below, some empirical properties of prepositions are specific to functional categories. In particular, we are talking about the closed-class property, the morphophonological dependency (prepositions may exhibit clitic properties and may lack accent – section 4.2) and the complement obligativity (sections 4.2 and 4.4 below). Nevertheless, as we shall also see in the second part of the paper, other empirical properties go against the lexical status of prepositions, namely the possibility to extract or delete their argument (section 4.4.4). This property is, however, less persuasive in the sense that, on the one hand, it is not found in all languages (see, for instance, Romance) and, on the other hand, it does not characterize all prepositional phrases (see the Germanic languages). Put together, these properties clearly lead towards an analysis of prepositions in terms of functional categories.

At this point of the paper, we may add that prepositions are the only items which lack a corresponding functional category (see the representations proposed in (1) and (2) above). Actually, this point needs to be developed: more precisely, we may wonder if the lack of a corresponding functional category represents a clue for considering prepositions as being themselves. Indeed, the last property evoked here is Grimshaw's (1991 and 2005) main argument for an analysis of prepositions in terms of extended projections of a nominal phrase. Accordingly, she considers that prepositional phrases are extended projections of the nominal phrases, similarily to CPs which are extended projections of IPs / VPs. She proposes to represent this parallelism as follows:

(5)   a.   V $[+V, -N]$ F0
        b.   I / Flex $[+V, -N]$ F1
        c.   C $[+V, -N]$ F2
(6)   a.   N $[-V, +N]$ F0
        b.   D $[-V, +N]$ F1
        c.   P $[-V, +N]$ F2

We will not insist on the analysis of the verbal categories, i.e. the ones defined in (5). We will, however, go into the detail of the analysis of nominal categories such as they are defined in (6).

The analysis proposed in (6c) for prepositions seems in fact to come against the one proposed by Chomsky (1981), who defines prepositions as items displaying features $[-N, -V]$. Such a definition implies that they are not a lexical category, since – according to this author's hypothesis – only positive values of the features N and V are relevant for defining this type of category. On the other hand, Chomsky's definition does not exclude the possibility that prepositions be considered as functional elements. At first sight, this

possibility seems to be rejected by Grimshaw's analysis, such as formulated in (6) above. If we compare the two authors' definitions, we may observe an incompatibility between the corresponding matrix features: in Chomsky's work, prepositions are defined as being [–N, –V], while in Grimshaw's work they are defined as [–V, +N] F2. Put differently, the first author defines prepositions as having a negative value for the feature N, while the second one considers that they have a positive value of N. The consequence of this analysis is that in Grimshaw's view prepositions might be considered as lexical categories, since they exhibit the [+N] feature. Note that, in fact, the [+N] feature characterizes the preposition's complement (i.e. its argument) and not the preposition itself.

In order to better express this contrast, we will adopt the representation proposed by Zwarts (1997) that we have already mentioned in (4) above. According to his proposal, prepositions are functions that do not display themselves the value [+N], but only their domains (i.e. their arguments) do. Zwart's proposal, in (7) below, is particularly interesting in that it avoids the potential ambiguity occurring with Grimshaw's definition given in (6c) above:

(7)   P   [F ([–V, +N])]

The above representation shows that prepositional phrases may effectively be conceived as extended projections of the nominal phrase, since the features [–V, +N] characterize the preposition's argument, i.e. the nominal phrase.

This type of repesentation, however, raises another problem, because it is identical to the one proposed for defining determiners, in (4a) above. This formal identity is at least awkward, especially if we take into account the order according to which determiners and prepositions combine with their arguments. A nominal phrase first combines with a determiner. Then the resulting phrase may combine with a preposition. The reverse is not possible, i.e. a determiner phrase cannot combine with a preposition. As they are defined in (4a) and (7) above, determiners and prepositions do not fall under this constraint. In order to solve this problem, Grimshaw proposes a solution which is similar to the one that we have mentioned for representing inflection and complementizers (see f.n. 2). More precisely, she proposes to insert into the determiner and preposition's matrix two different F features: [F1] for D and [F2] for P, respectively (cf. aslo the representations in (6b, c) above). The following revisited representations take into account both Grimshaw's proposal (with respect to the insertion of two different F features) and Zwart's proposal (concerning the domains to which determiners and prepositions may apply):

(8)   a.   D   [F1 ([–V, +N])]
         b.   P   [F2 ([–V, +N])]

This representation allows us to conceive determiner and prepositional phrases as being extended (functional) pojections of the nominal phrase. Additionally, it presents the advantage of clearly distinguishing the order according to which determiners and

prepositions combine with their arguments. Finally, it shows that prepositions and determiners are not themselves lexical categories. Only their domains (i.e. arguments) are.

2.3 All prepositional phrases are not extended projections of the nominal phrase

The preceding formal analysis seems indeed very convincing. However, it may not be applied to all prepositional phrases.

In this section, we will show that there are various cases in which prepositional phrases cannot be analysed as extended projections of the nominal phrase. In other words, certain prepositions may apply to domains (i.e. to arguments) that are not nominal. In that sense, let us recall Melis' (2003: 13) observations according to which "la préposition n'entretient pas de lien exclusif avec le groupe nominal, même si cette association est privilégiée. La seule contrainte générale est négative: le complément d'une préposition ne peut pas être une structure phrastique à forme verbale finie qui n'est pas nominalisée". The following French examples adapted from Desmets and Moline (2007: 5) illustrate these properties :

(9)   Je le tiens pour vrai.   P + AP
(10)   a.   Jusqu'à maintenant tout va bien.   P + AdvP
        b.   Il a surgi de derrière.
(11)   a.   Il a surgi de derrière le mur.   P + PP
        b.   Va jusqu'à chez Paul, puis tourne à droite.
        c.   Une infusion pour après le repas.
(12)   a.   Il reste du travail à faire.   P + V$_{NONFINITE}$P
        b.   Paula s'offre une capeline brodée pour sortir dans le monde.
(13)   *L'ampleur de la catastrophe s'impose comme serait le prix de notre négligence.
        P + V$_{finite}$P

The preceding paradigms clearly show that prepositions may combine with arguments which display various categorial statuses: adjectival phrases in (9), adverbial phrases in (10), prepositional phrases in (11), non finite verbal phrases in (12). However, prepositions cannot combine with a finite verbal phrase (i.e. with an inflectional phrase), as shown in (13). In terms of features, these distributional properties are equivalent to the fact that preposition's aguments are not always [–V, +N], but may also be [+V, +N] (it is namely the case of adjectival arguments of prepositions). On the other hand, preposition's arguments are never [+V, –N] – which is in fact expected since this latter type is specific to complementizers (cf. the representation in (4b) above).

Prepositions' ability to combine with different arguments may seem unexpected, given that their prototypical argument is most of the time nominal. Actually, this paradox may easily be explained by prepositions' functional status as we have defined it above, following Zwarts (1997), i.e. this property of being functions that apply to domains (i.e. arguments) in order to generate other phrases. If we compare prepositions to complementizers, we may suppose that the first have a wider domain of application than

the latter, since it may concern not only nominal projections, but also adjectival, adverbial, non finite verbal or prepositional projections.

In fact, this property allows us to distinguish prepositions from determiners, on the one hand, and prepositions from complementizers, on the other hand. This difference may be expressed in the following way: while determiners and complementizers are functions that constrain (i.e. select) the categorial nature of their domain (in the sense that they combine exclusively with arguments being [–V, +N] and [+V, –N], respectively), prepositions are functions that do not constrain the categorial nature of their domain, but only block combinations with certain types of arguments, namely with [+V, –N] categories.

This observation raises a more general question concerning the categorial status of prepositions (and that of the phrases they may generate) with respect to the argument they take. More precisely, we should ask if prepositional phrases may be analysed as extended projections of theirs arguments in all contexts in which they occur. In other terms, should we analyse prepositional phrases embedding adjectival, verbal or adverbial phrases as extended projections of these categories, just as we did for prepositional phrases taking a nominal argument? An intuitive answer would be no, but further research needs to confirm it.

3. Prepositions as a semilexical category

Let us now close the theoretical discussion on prepositions by offering a summary of the formal properties examined in the previous section. At the same time, we would like to propose an analysis of prepositions in terms of semilexical categories, based on the following elements.

In sections 2.1 and 2.2, we have shown that prepositions do not belong to lexical categories and that, due to various formal properties, they are similar to functional categories without however being pure functional categories. That is why we consider them to be a specific type of functional category. In this perspective, we have seen that prepositional phrases embedding nominal arguments may be analysed as extended functional projections of nominal arguments (section 2.2). However, it is not sure whether this analysis may be defended for prepositional phrases embedding non nominal arguments (section 2.3).

At this point of the discussion, we would like to introduce a lexical element illustrating the specific nature of prepositions. We will see in the second part of this paper (section 4.1 below) that prepositions may express various lexical meanings (most of time, locative and temporal). We have not taken this criterion into account up to now because we haven't considered it as a strong formal property by itself. Nevertheless, the presence of the lexical meaning within a category is usually correlated with another formal property, namely the ability of theta-role assignement.

In fact, Rauh (1994) shows in a study about preposition's argumental structure that most of them may assign a theta-role to their argument. The following examples illustrate this lexical property of prepositions: in (14a), the quoted prepositions may assign the Locative role; in (14b), the Instrument; in (14c) the Goal / Addressee; in (14d), the Agent.

(14)   a.   Fr. *sur*, Engl. *on*, Rom. *pe*
        b.   Fr. *avec*, Engl. *with*, Rom. *cu*
        c.   Fr. *à*, *pour*, Engl. *to*, Rom. *pentru*
        d.   Fr. *par / de*, Engl. *by*, Rom. *de (către)*

This last property distinguises prepositions from other functional categories (such as determiners, inflection and complementizers), which cannot assign a theta-role to their arguments. On the other hand, it assimilates prepositions to other lexical categories, namely to verbs (cf. also Pană Dindelegan 1997 and 2007). Put differently, prepositions which are able to assign a theta-role are predicates as well as other lexical categories are.

        If we recall now the property of certain prepositions in Germanic languages that may allow complement-deletion and complement-extraction, we may observe that their lexical properties are actually more relevant than we have suggested up to now.

        The mixture of properties underlined in the preceding paragraphs clearly leads towards an analysis in terms of hybrid categories. Dealing with such a situation, we will adopt a less radical analysis and will admit that prepositions, as a category, indeed display very heterogenous properties (cf. also *GA* 1966, Pană Dindelegan 1992, Huddleston and Pullum 2002, Cuniță 2004, Gaatone 2007).

        More precisely, we argue that prepositions constitute a **semilexical** category (in the sense of Corver and van Riemsdijk 2001). According to this assumption, semilexical elements are items which display a hybrid categorial status. Their specific feature is to share certain properties of the two prototypical categories, lexical (nouns, verbs, adjectives) and functional (determiners, inflection, complementizers, degree morphemes).

        We may now represent this analysis by using the following gradual figure (adapted from Zwarts 1997). According to this representation, prepositions seem to sit between the two extremes of the categorial axis, more precisely between pure lexical and pure functional categories:

(15)   Representation of language categories
              lexical   semilexical   functional
          < -------------- > ………….. < -------------- >
              N, V, A   P   D, Infl, C, Deg

It is obvious that this characterization is a very global one and that it captures only the most salient properties of prepositions with respect to other categories. In other words, it does not exclude specific analyses with respect to the various uses of prepositions (recall the analysis in terms of extended projections of nominal phrases). On the other hand, it does not exclude the existence of (at least) two types of prepositions: some (more) lexical and others (more) functional. In the next section, we will take a closer look at this distinction.

4. Empirical properties of prepositions. Lexical vs. functional prepositions

        We have seen up to now that there are various formal properties that make prepositions similar to functional categories while others bring them closer to lexical

categories. Accordingly, researchers usually make a distinction between two prepositional subtypes: (i) lexical prepositions and (ii) functional prepositions (see recently, Mardale 2009, Geană 2010). In what follows, we will examine this distinction on the basis of different empirical criteria.

4.1 Meaning

It has been observed that lexical prepositions always have a full lexical content (Gougenheim 1959, Spang-Hanssen 1963, Cadiot 1997), and this has been correlated with their capacity to assign a theta-role (Rauh 1994, Pană Dindelegan 1997), as in (16) below:

(16) a. Occ. Hi han anat **malgrat** en Pere.   (Fagard and Mardale 2007)
          'They went there despite Pierre.'
      b. Cat. El projectil es mou **segons** una trajectòria parabòlica.
          'The projectile is moving along a parabolic trajectory.'
      c. Fr. Ils sont partis au large **malgré** l'avis de tempête.

In contrast, functional prepositions have a more abstract meaning that has been correlated with their incapacity to assign a theta-role. Compare, for istance, the functional use of French *à* in (17a) with the lexical one in (17b):

(17) a. Fr. Max a offert un œillet **à** Léa.
      b. Fr. Max est apprenti **à** la boulangerie.

4.2 Morpho-phonology

It is commonly assumed that the absence of full lexical meaning comes along with other phenomena, such as reduction, lack of accent and fusion (Sechehaye 1926, Abeillé et al. 2003, Fagard 2010). In that sense, it has been observed that functional prepositions are always reduced phonetically, specifically, most of time, they are monosyllabic). Moreover, depending on the context, functional prepositions may often lack (phrasal) accent. The prepositions in (18) exhibit all or part of these properties:

(18) a. Fr. *à*, *de*, *en*
      b. Rom. *a*, *de*, *la*, *pe*
      c. Engl. *to*, *by*
      d. It. *di*

The following paradigm shows that it is not the case for lexical prepositions:

(19) a. Fr. *dessus*, *derrière*, *pendant*
      b. Rom. *pentru*, *înaintea*, *înăuntrul*
      c. Engl. *between*, *underneath*, *during*

In Romance, for instance, fusion is equally frequent:

(20)   a.   Ptg. *ao*, *do*, *pelo*
       b.   Sp. *al*, *del*
       c.   Fr. *du*, *des*, *au*, *aux*
       d.   Occ. *al*, *del*
       e.   Cat. *al*, *del*, *pel*
       f.   It. *al*, *del*, *nel*
       g.   Ger. *im*, *ins*, *dem*, *zum*

However, fusion and reduction do not characterize functional or lexical prepositions exclusively, but may be a common property, as illustrated in (20') for lexical uses of *à* and *de* in French:

(20')   a.   Fr. *Jean est allé au parc.*
        b.   Fr. *Léa revient des montagnes*.

On the other hand, functional prepositions may often be part of complex (lexical) prepositions (21) or adverbs (22):

(21)   a.   Fr. *après*, *avant*
       b.   Fr. *dedans*, *depuis*
(22)   a.   Fr. *par rapport à*, *à la différence de*
       b.   Fr. *en vue de*, *vis-à-vis de*, *en dépit de*, *à l'égard de*
       c.   Rom. *spre deosebire de*, *faţă de*, *alături de*

4.3 Open vs. closed class. Etymology

Lexical prepositions may appear from time to time via grammaticalization of different lexical categories (Hopper and Traugott 1994, Fagard 2010). Note that they may be the result of different stages of grammaticalization (Heine and Kuteva 2006). The examples in (23) illustrate some recent (lexical) prepositions deriving from nouns, while those in (24) illustrate (lexical) prepositions deriving from various categories:

(23)   a.   Fr. **Côté** finances, la situation est assez tendue.
               Remarque, ta caisse aussi est nulle **question** sécurité.
               Fr. On voit un homme, **genre** prince charmant, qui vient sauver la belle demosielle
       b.   Rom. Frizerul **tip** Figaro – un "meseriaş" pe ducă
               'Hairdressers such as Figaro are endangered'
               aş vrea să am o angajată **gen** Sandee Westgate care să facă (…)
               'I would like to have an employee like Sandee Westgate, to make (…)'
       c.   Cat. J. Johnson […] esperava una dona **estil** Jennifer López
               'J. Johnson [...] was waiting for a woman like Jennifer López'
       b.   It. Cerco un uomo **tipo** orso, grosso, peloso e robusto
               'I am looking for a man like a bear, big, hairy and stocky'

It. […] ci fosse stata una donna **tipo** la Rice
'if there had been a woman like Rice'

(24) a.   Adv > Fr. *après*; Rom. *înaintea*, *înapoia*
b.   V > It., Ptg., Sp. *durante*; Fr. *suivant*, *moyennant*; Rom. *datorită*, *mulțumită*
c.   N > Fr. *côté*, *chez*
d.   A > It. *lungo*; Sp. *bajo*; Fr. *sauf*
e.   P > Fr. *à*, *en*; Rom. *pe*, *sub*

In contrast, functional prepositions are supposed to form a closed class (i.e. without new elements). Moreover, Romance functional prepositions come exclusively from Latin lexical prepositions (25a) with the exception of Romanian *la* (25b):

(25) a.   Lat. *de*, *in*, *ad*, *ex*, *per*
b.   Lat. Adv *illac* + (P) *ad* (Densusianu 1961, *DEX* 1996)

4.4 Syntax

4.4.1 Alternation with other prepositions

In most of their uses, functional prepositions cannot alternate with other (lexical or functional) prepositions. The examples in (26) illustrate this impossibility:

(26) a.   Fr. Max a donné un colis **a**u facteur.
b.   Fr. *Max a donné un colis **pour** / **vers** / **sans** le facteur. (= (26a))
(26') Fr. Max a donné un colis **pour** le facteur. (≠ (26a))

Unlike functional prepositions, lexical ones may generally alternate with other (lexical) prepositions[4], as shown by the following examples:

(27) a.   Fr. Max a dormi **pendant** / **durant** la conférence.
b.   Rom. Max a dormit **pe** / **lângă** / **sub** pat.
'Max slept on / near / under the bed.'

4.4.2 Binding

With respect to structural relations, it has been observed that functional and lexical prepositions behave differently (a.o., Demonte 1987, Collins 2005, Roberts 2007). More precisely, lexical prepositions are barriers for certain phenomena defined in terms of c-command (in this particular case, binding). For instance, the phrase in (13) below is

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[4] On this view, subcategorized prepositions appear to be functional too (cf. also Gorrie 2008, Geană 2010), since they cannot alternate with other prepositions:
(i)   a.   It depends **on** / *for / *by / *to the weather.
b.   Rom. Se bizuie **pe** / *pentru / *la / *în ajutorul colegilor.
'S/he counts on her / his friends help.'

ungrammatical because the element *for* or *despite* is a lexical preposition blocking the binding of the trace *t* by its antecedent:

(28)   *John$_i$ seems **for / despite** Mary t$_i$ to be nice.

On the other hand, the phrase in (29) is well formed since the element *to* is a functional preposition which does not block binding:

(29)   John$_i$ seems **to** Mary t$_i$ to be nice.

4.4.3 The categorial status of P's complement

Lexical prepositions generally take a DP (and sometimes an AdvP, PP or AP) complement and project a lexical PP. The latter may alternate with an adverbial Cl or an AdvP:

(30)   a.   Fr. Max dort **à la piscine**   → Max **y** dort / Max dort **là-bas**.
        b.   Rom. Max a dormit **la piscină**   → Max a dormit **acolo**.
                'Max slept at the swimming pool.'   'Max slept there'

In contrast, functional prepositions combine with a DP-complement and do not seem to project a PP (Abeillé et al. 2003, Carmen Dobrovie-Sorin p.c., Danièle Godard p.c.). In other words, functional prepositions seem to generate projections with the same categorial status as their complement (i.e. nominal). This is supported by the capacity of functional prepositions' projections to alternate with personal pronouns (cf. Milner 1982):

(31)   a.   Fr. Max offre le dîner **à trois collègues**   → Max **leur** offre le dîner.
        b.   Rom Max a oferit cina **la trei colegi**   → Max **le**-a oferit cina (**lor**).
                'Max offered dinner to three (of his) colleagues.' 'Max offered them dinner'

4.4.4 Syntactic function of P's projection

The above-mentioned contrast is to be correlated with the fact that lexical prepositions generally introduce modifiers, while functional ones only introduce arguments (Rizzi 1997, Gaatone 2007).

In addition, certain functional prepositions may introduce arguments with specific properties, such as direct objects (32) or indirect objects (33) in Romance (Mardale 2009):

(32)   a.   Rom. Ion l-a întâlnit **pe** Petre.
                'Ion met Petre'
        b.   Sp. Juan lo encontró **a** Pedro.
        c.   Sard. Appo vistu **a** Juanne.
                'I saw Juanne.'

(33)   a.   Fr. Je donne le journal **à** Pierre.
        b.   Sp. Le regalé un caramelo **a** Pedro.
        c.   Rom. Am dat cărți **la** cinci prieteni.
              'I gave books to five friends.'

Furthermore, the complement of lexical prepositions may be deleted in specific, i.e. anaphoric or deictic, contexts (see a.o. Pană Dindelegan 1992 and 1997):

(34)   a.   Rom. Ion a sosit **la** Crăciun$_i$, iar Maria **după** (~~Crăciun$_i$~~).
              'Ion arrived at Christmas and Maria (arrived) after'
        b.   Fr. Les Dames restent sur **le** canapé$_i$ et les Messieurs **à côté** (~~du canapé$_i$~~).

In contrast, functional prepositions never allow complement-deletion, as illustrated in (35):

(35)   a.   Rom. *Ion l-a întâlnit **pe** Petre$_i$, iar Maria tot **pe** (Petre$_i$)*.
              'Ion met Petre and Maria too'
        b.   Sard. *Appo vistu **a** Juanne$_i$, e Segnora Ledda a (Juanne$_i$)*.
              'I saw Juanne and Miss Ledda too'
        c.   Sp. *Le regalé un caramelo **a**l niño$_i$ y Pedro también **a**(l niño$_i$)*.
        d.   Fr. *Les femmes se sont adressées **a**u maire$_i$ et les hommes également **a**(u) (maire$_i$)*.

4.5 Summary

The following table summarizes our findings so far:

Table 1.

	Properties	Lexical Ps	Functional Ps
1	have a lexical meaning	+	−
2	assign a theta-role	+	−
3	have a short form (monosyllabic)	±	+
4	do not bear (phrasal) accent	±	+
5	may fuse with other categories (D)	±	±
6	are a closed class	±	+
7	have various etymons	+	−
8	may alternate with other Ps	+	−
9	are barriers for c-command / binding	+	−
10	change the categorial status of their complement	+	−
11	their projections function as arguments	±	+
12	complement-deletion	±	−

5. Conclusions

The table above illustrates the fact that prepositions indeed form a heterogenous class, combining lexical and functional properties (cf. Pană Dindelegan 1997 and 2003). They are, as shown in section 3 above, a **semilexical** category (see a.o. Zwarts 1997).

In spite of some common properties, this table shows that an additional distinction – between lexical and functional prepositions – may be operated and is fully justified.

The table above also shows that numerous criteria do not allow us to establish a clearcut distinction between the two subclasses. In other words, it is difficult to represent this dichotomy only in terms of the presence or absence of a given property. Thus, we need to combine various criteria, particularly when working in a contrastive perspective within a class of elements (i.e. all prepositions) considered as semilexical.

Furthermore, we suggest that the difficulty of such a characterisation is due to some other reasons.

Firstly, all criteria in the table above are not equally relevant (compare feature 5, for instance, with features 1-2). On the other hand, note that some of them have not been elaborated for the analysis of prepositions exclusively. In that sense, the criterion we proposed under 10 seems more specific to prepositions than features 1, 2, 7, 9 (which have also been proposed for the analysis of verbs or other categories).

Secondly, if we take a closer look at functional prepositions, we may observe that there are different degrees or types of functionality. Evidence from Romanian suggests that there are at least three subclasses of functional prepositions, the uses of which are all semantically (36) and / or morphosyntactically (37)-(38) constrained:

(i) differential object markers (cf. also Sp., Sard. *a*):

(36)	a.	îl admir **pe** el
		'I admire him'
	b.	îl cunosc **pe** Radu
		'I know Radu'

(ii) (morphological) case markers (cf. also Fr. *à*, *de*; Sp. *a*):

(37)	a.	adunarea **a** tot satul
		'the assembly of the hole village
	b.	au fost date **la** doi copii orfani
		'they have been given to two orphans'

(iii) adjunction markers (cf. also Tagalog *na*, Chinese *de*):

(38)	a.	o casă **de** pe munte
		'a house on the mountain'
	b.	un pod **de** peste Dunăre
		'a bridge under the Danube'

On the other hand, some prepositions do not belong exclusively to one class or to the other. In other words, a preposition may have both lexical and functional uses:

(i) lexical *a* / *à*

(39) a.   Sp. *Fueron **a** la playa.*
      b.   Fr. *Ils sont allés **à** la plage.*

(ii) functional *a* / *à*

(40) a.   Sp. *Busco **a** un estudiante inglés.*
      b.   Fr. *La bourse a été attribuée **à** un étudiant anglais.*

Finally, it has to be noted that – from a theoretical point of view – functional prepositions have been considered not as projecting prepositional phrases, but rather as being overt realizations of different functional categories. For instance, prepositions that mark differentially (direct) objects have been analysed in terms of a strong (accusative) Case, which blocks the incorporation of specific direct objects – for this point, the reader is referred to De Hoop (1992), Dobrovie-Sorin (1994), Dobrovie-Sorin and Beyssade (2004) and Mardale (2009).

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