

How many Ps in a pod? A few remarks on the status of P in the pool of syntactic categories

HENK VAN RIEMSDIJK

Being one of those P-afficionados who has been trying to stir up the P-soup¹ for more than 42 years now, attempting to gain some insight into the still quite mysterious properties of the category P, interesting publications on P/PP always attract my interest. A particularly welcome contribution was the article ‘On the Syntax of Prepositional Phrases’ (Bayer & Bader, 2007). I use the present opportunity to make a few remarks about properties of various kinds of P that were partly prompted by this insightful article, the central issue of which is the contradistinction between P as the head of a lexical projection and P as a functional element.

Some properties point in one direction, and some in the other. The question really is whether the two sets of apparently opposing properties can somehow be made compatible. Let us start by listing some of the apparently opposing properties.

P as a lexical head

- PPs can often appear more or less alone, e.g. as predicates of small clauses or as adjuncts to nouns (*with Mary in the hospital, the base camp halfway up on the slope of Mt. Everest*).
- P can be a case assigner, more or less like a verb.²
- While P is pretty much a closed class item (languages like English or German do have somewhere around 120 lexical items that should be classified as P)³, it is nevertheless

1 My first paper on the topic was written in 1973 and bore the title ‘The Dutch P-Soup’. It has remained unpublished as it was a first step on the road that would eventually lead to my dissertation/book (van Riemsdijk, 1978).

2 There is one important difference. The cases assigned by P are oblique cases, while those assigned by V are (mostly) grammatical cases. In particular, there are reasons to believe that a prepositional accusative has properties that are different from direct object accusatives. There are also reasons to believe that datives in the domain of P are default cases while indirect object datives are not. See van Riemsdijk (2012). For more evidence along these lines, see Bayer & Bader (2007).

3 I am assuming that adverbs are not a syntactic category but rather a functional one. In other words, Ps, As and Ns can function as adverbs.

fairly easy to create new ones such as *pending the outcome of the elections, these problems notwithstanding/notwithstanding these problems, re those remarks you made, we'll have dinner chez my parents*, etc.

- P can create a c-command domain preventing the object of P to be a controller of some clausal complement outside that PP: *I_i live with a woman_j [PRO_{i/*j} to water my plants]*.

P as a functional head

- P is sometimes transparent to selectional relations. This can be seen, for example, in pseudopartitives. By saying *I drank a glass of wine* I mean that I drank wine, not that I drank a glass that happened to contain wine. But by saying (*)*I drank a glass with wine* I seem to imply that I drank the glass as well as the wine. Hence English *of* in pseudopartitives is transparent to selection and best viewed as a functional head in a nominal projection (see below). Indeed a functional preposition like *of* is generally absent in Dutch, German and many Scandinavian languages.
- In so-called prepositional objects the semantics of the preposition is extremely bleached and the choice of the P is mostly unpredictable, as in English *wait for* vs. Dutch *wachten op* (on).
- P may sometimes be more like an instantiation of case, a free morpheme that expresses something that other languages express by means of (usually oblique) case, as with the locative cases of Finnish. Take *minä menen kauppaan* (I am going (in-)to a shop), where the suffix -(h)an in *kauppaan* expresses what English expresses with the preposition (in-)to. See van Riemsdijk & Huijbregts (2008) for discussion.
- In prepositional object constructions, the object may sometimes be a controller of a PRO in a complement clause, as in *I rely on you_i [PRO_i to solve the problem]*.
- There is sometimes more than one prepositional element inside a single PP. This is unexpected if P can only be a lexical head, as lexical heads are unique in their (extended) projection. A typical example is found in Dutch and German circumpositional constructions. Take German *er springt auf das Dach hinüber* (he jumps across onto the roof). Here the first P (*auf*) determines the endpoint of the movement while the second P (*hinüber*) defines the orientation of the movement: not up, not down, but across. See van Riemsdijk (1990) and van Riemsdijk (2012) for more discussion.

Without necessarily contradicting the approach sketched in Bayer & Bader (2007), I want to use this opportunity to point out that the system I have developed in a number of publications is able to account in a simple and transparent way for the dual nature of the category P. Indeed, it was designed to account for two types of dual behavior of P/PP. On the one hand, there is the fact that P/PP is the most versatile of the four major categories N,V,A, and P. PPs can take a maximal projection of any one of the four as its complement, while the other three are severely restricted in that N cannot take NP complements and V cannot take bare

VP complements while A is often even more restricted. Inversely, PP can be the complement of any of the others. On the other hand, there is the fact that P vacillates between the status of a lexical and a functional head, as stated in the Bayer & Bader article cited earlier and as briefly summarized above. In my earlier publications, I had stressed the first of these dualities and in this brief note I want to expound the second one.

The analysis of the system of categorial heads and projections that I presented in van Riemsdijk (1998) was based on earlier work by Jane Grimshaw (1991, 2005) and myself (van Riemsdijk, 1988; van Riemsdijk, 1990). What we agreed on and took to be central to an account of the categorial system was the idea of **Categorial Identity** which boils down to the observation that in an extended projection there is one lexical head and potentially several functional heads, and that all these heads have the same categorial signature. In other words, the functional shells around a noun are all headed by nominal elements. Similarly, the functional heads in an extended V-projection are verbal in nature. I had also claimed in my (1990) article on functional prepositions that the same thing was true for the functional shells around a lexical P-head. My other basic tenet was that the plus- and minus-values of the categorial features $[\pm N, \pm V]$ are not equally strong. In fact I explicitly assumed a mono-valued, a privative system of categorial features in my (1988) paper to express this asymmetry. Unfortunately, in van Riemsdijk (1998) I used (misguidedly, I now believe) the binary feature system in which I had to stipulate the asymmetry.⁴ But in view of the fact that the system as outlined in the (1998) article is the most explicit and detailed, I'll use the main features of that account here.

Starting⁵ with Vergnaud's (2008) case filter, which we may for the sake of convenience abbreviate as *N-NP, and Longobardis (1980) parallel observation that *V-VP the idea that there is some kind of abstract haplology (indeed, an OCP-effect) underlying the interactions of categories in the categorial system has been haunting the minds of a number of syntacticians. Hoekstra (1984) proposed to generalize the above filters (*N-NP and *V-VP) to what he called the Unlike Category Constraint *XX (where X ranges over N, V, A, and P). But this is both too strong and too weak. It is too strong because PPs can be complements to P which would constitute a violation of *XX. And it is also too weak because APs cannot be the complements of N or V. I therefore proposed an alternative filter or constraint in van Riemsdijk (1988) which intended to express the asymmetry in the categorial system. I called it the Unlike Feature Constraint (UFC). Translated into the binary feature system that I adopted in the (1998) article, the UFC can be stated as follows.

(1) **The Unlike Feature Constraint (UFC):**

$*[+F_i]^{\circ} - [+F_i]^{\max}$ where $F_i = N$ or V

The reader can easily ascertain that this formulation will by and large make the right predictions in that it excludes N-NP and V-VP and also the impossibility of both N and V to take AP as their complement while at the same time predicting that P/PP, which has only negatively specified features ($[-N, -V]$), can occur anywhere and can take any kind of complement.

4 In van Riemsdijk (to appear) I sketch a research program aiming at developing a system of categorial features that is fully privative and which incorporates the basic insights that I tried to express in the (1998) article.

5 Both can really be seen as developments of Ross' Double-ing Constraint (Ross, 1972).

A second property of the system that I proposed was that, in contradistinction to Grimshaw's (1991; 2005) ideas, I assume that each extended projection has one lexical head, potentially several functional heads at intermediate projection levels, but only one maximal projection node at the very top.

The third and last property that I will briefly introduce here is what I called No Value Reversal. The relevant part of this principle, the one that concerns the categorial features, is stated as follows.

(2) **No Value Reversal (NVR):**

Within a single projection, the following holds:

$$\begin{array}{l} * [+F_i] \text{ where } F_i \text{ ranges over } N, V \\ | \\ [-F_i] \end{array}$$

This is, in some sense, a weakening of the Categorial Identity Thesis (CIT) in that it does allow categories that are differently specified for the categorial features $[\pm N, \pm V]$ to build the spine of a maximal extended projection. Notice, however, that this weakening is in reality another effect of the asymmetry of the plus and minus values of the features. What the NVR actually says is that, going from bottom to top in a projection it is possible to 'lose' a plus value for N or V. What this means in effect is that an N-projection $[+N, -V]$ may have an $[-N, -V]$ outer functional shell. Similarly, a V-projection may also have a $[-N, -V]$ outer functional shell. This is precisely what we should want. First, as noted above, prepositional objects act as if they were single extended projections in that it is the lexical head N that is selected by V, unhindered by the presence of a (functional) P. Similarly, following Emonds' (1985) insight that CPs are really PPs, the extended projection of a lexical V may be topped off at the outermost shell(s) as a PP.

In short, there are, under this type of system, two main types of PPs.⁶ The first type is a maximal P-projection of a lexical P, as in figure 1, and the second type is a maximal P projection of a lexical N-head, as in figure 2.⁷

6 I use the notation I adopted in my (1990) article, inspired by the introduction of vP. In other words, n° and p° are functional heads of the types $[+N, -V]$ and $[-N, -V]$ respectively. Similarly n' and p' are intermediate projections.

7 There is, of course a third major PP-type, viz. a maximal P-projection of a lexical V-head, but this type has remained outside of our considerations in this short note.

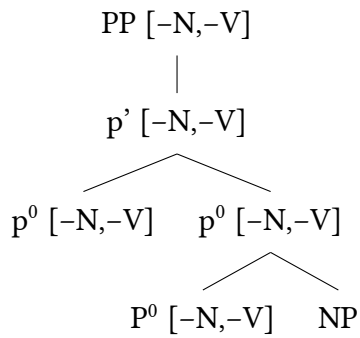


Figure 1

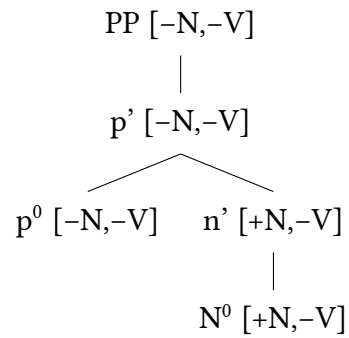


Figure 2

Prepositional objects typically have the structure in figure 2 while independent PPs are represented as in figure 1. We can now run through the lists of properties of the two types to see how they are accounted for.

P as a lexical head

- A standalone PP generally has a meaning determined by the semantic features of its head. Despite the more or less closed class character of Ps, this makes it plausible to say that they are listed in the lexicon in much the same way as nouns and verbs.
- In figure 1 it is immediately clear that a lexical P can assign case.
- In a structure like the one given in figure 1, it is clear that the NP is the object of the lexical P. The NP is a maximal projection node in its own right and hence a node that defines a c-command domain. This will prevent the N in the object of a P from c-commanding anything outside its containing NP, and hence from controlling any PRO-subjects in the domain of the containing VP.

P as a functional head

- Selection of a nominal head across a (functional) P inside a structure like figure 2 is straightforwardly possible, as the lexical N-head is the head of the PP that constitutes its maximal projection node.
- The semantic bleaching of prepositions in prepositional objects is expected as it is typical of functional heads more generally.
- The p°s in the outer functional shell of N in structures like figure 2 are free morphemes in the few examples we have discussed, but as pointed out above the very same types of heads specifying, for example, an orientation of a motion can be expressed by bound morphemes in other languages, in which case we tend to refer to them as case affixes.
- Given that the N in structures like figure 2 is the head of the maximal P-projection, it is natural that the phrase that it heads (that PP) can exercise control of the interpretation of PRO-subjects in the containing VP.

- The existence of structures with multiple P-heads such as circumpositional PPs is straightforwardly accounted for in terms of structures such as figure 2.

I conclude that, while not, perhaps, fully compatible with notions of bare phrase structure such as those entertained in minimalist theories, there is much to be said in favor of pursuing the line of research I have been following over the past two and a half decades. As pointed out above, maintaining the binary feature system in my (1998) article was a mistake, and I intend to explore ways in which an element theory approach (one using privative features) such as the one I envisaged in my very first paper on these issues (van Riemsdijk, 1988) can yield a more transparent and technically simpler account of the insights summarized above (cf. van Riemsdijk, to appear).*

* This little note is dedicated to Josef Bayer. By way of “supporting evidence” I reproduce the small eulogy that I presented before giving my talk at the ceremony on November 19, 2015.

Dear Joe, it was to appear as a remarkable coincidence that my talk, to which your collaborators so kindly invited me, came right after your birthday on November 15. The strange thing is that you were quite obviously surprised, as it was a very special birthday indeed. You turned 65, and not only that, it also means that in a few months you will be joining me (and many of our contemporaneous colleagues) in the status of retired professor. Retired professors tend to be automatically labeled as “emeritus.” Obviously, some of the emeriti do not necessarily merit such a distinction. But you do! Without listing all the important works that you have published, let me simply say that you are not only an extraordinarily gifted and original theoretical syntactician. You are also an excellent psycholinguist and have done a lot to help bridge the considerable gap between linguistic theorizing and psycholinguists. Furthermore, you have established yourself as a leading scholar in the area of South Asian languages, in particular Bangla. And indeed your work on German and some of its Southern dialects has been extremely influential.

All of this did not come about easily. After your doctorate in Konstanz you stayed on for four years. But then you went to Aachen, already only a stone’s throw away from Holland, where you worked on aphasia and cognitive disorders more generally. This must have been a blessing in disguise, for your next career move was to go to the Max-Planck Institute in Nijmegen, a German exclave truly in Holland this time. You and I know that that institute suffers from one giant cognitive disorder, so you came well-prepared. After an amazing five years you left and, after defending your habilitation in Konstanz in 1991, you became an itinerant professor in spe, serving one year each in Düsseldorf, Vienna (incidentally exactly a year after I had been there), and Stuttgart. That would easily have sufficed to give anyone a huge cognitive disorder. But you bravely survived even this and, at last, got your well-deserved professorship at the University of Jena in 1994, whence after six years you transferred to your more congenial alma mater Konstanz. A colorful career indeed!

Josef, congratulations on your birthday! Stay healthy, be happy, enjoy your retirement, indulge in the other great love of your cultural life: music. But please, pretty please, don’t waste all these invaluable free hours on endless Wagner operas and do keep a few of those hours to continue enriching us and the field with your linguistic wisdom.

References

- Bayer, J. & M. Bader. 2007. On the syntax of prepositional phrases. In A. Späth (ed.), *Interface and interface conditions*, 157–180. Berlin: Mouton de Gruyter.
- Emonds, J. 1985. *A unified theory of syntactic categories*. Dordrecht: Foris.
- Grimshaw, J. 1991. Extended projection. Ms. Brandeis University.
- Grimshaw, J. 2005. *Words and structure*. Stanford: CSLI Publications.

- Hoekstra, T. 1984. *Transitivity*. Dordrecht: Foris.
- Longobardi, G. 1980. Remarks on infinitives: A case for a filter. *Journal of Italian Linguistics* 5. 101–155.
- van Riemsdijk, H. C. 1978. *A case study in syntactic markedness: The binding nature of prepositional phrases*. Lisse: The Peter de Ridder Press.
- van Riemsdijk, H. C. 1988. The representation of syntactic categories. In *Proceedings of the Conference on the Basque language, 2nd Basque World Congress*, 104–116. Vitoria-Gasteiz: Central Publication Service of the Basque Government.
- van Riemsdijk, H. C. 1990. Functional prepositions. In H. Pinkster & I. Genee (eds.), *Unity in diversity: Papers presented to Simon C. Dik on his 50th birthday*, 229–241. Dordrecht: Foris.
- van Riemsdijk, H. C. 1998. Categorial feature magnetism: The endocentricity and distribution of projections. *The Journal of Comparative Germanic Linguistics* 2. 1–48.
- van Riemsdijk, H. C. 2012. Discerning default datives: Some properties of the dative case in German. In G. Grewendorf & T. E. Zimmermann (eds.), *Discourse and grammar*, 247–287. Berlin: Mouton de Gruyter.
- van Riemsdijk, H. C. to appear. Elements of syntax: Repulsion and attraction. To appear in: *Interfaces* (working title), ed. Jianhua Hu. Amsterdam: John Benjamins.
- van Riemsdijk, H. C. & R. Huijbregts. 2008. Location and locality. In S. Karimi, V. Samiian & W. Wilkins (eds.), *Clausal and phrasal architecture: Syntactic derivation and interpretation: A Festschrift for Joseph E. Emonds*, 339–364. Amsterdam: John Benjamins.
- Ross, J. R. 1972. Double-ing. *Linguistic Inquiry* 3. 61–86.
- Vergnaud, J.-R. 2008. Letter to Noam Chomsky and Howard Lasnik on “Filters and Control,” April 17, 1977. In R. Freidin, C. P. Otero & M. L. Zubizarreta (eds.), *Foundational issues in linguistic theory: Essays in honor of Jean-Roger Vergnaud*, 3–15. Cambridge, MA: MIT Press.