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FG and prototype theory: a case study from English, German, Croatian and Hungarian

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0. Introduction

0.1. The scope and the organization of the paper

If the real contribution of prototype theory and its potential as a descriptive procedure are to be assessed in an unbiased way, it will be necessary to (i) highlight some of its tenets and basic notions as well as (ii) test its compatibility with various grammatical models. The present paper will focus on the latter task.

It is metatheoretically interesting to look for certain elements of prototype theory in various functionally oriented schools (e.g. Halliday, Givón, Dik) that claim to be continuing Praguian traditions, because there is a strong, though often overlooked, intellectual affinity between the Prague functional school and prototype theory.

Having in the introductory sections outlined some of the main assumptions of prototype theory, and pointed out a number of features it shares with the Praguian functional approach, we will try in the rest of the first part of the paper to find out whether it is justified to claim that a milder version of prototype theory meets with relative success in the description of certain linguistic phenomena where it can be argued to be a notational variant of the Praguian centre-and-periphery conception, whereas its stronger version often fails due to its non-linguistic aspects.

A model's potential for, or even its explicit adoption of some sort of prototype approach, be it only the core principles it shares with its Prague progenitor school or a fully-fledged methodological apparatus, may thus be considered to be, in a broader sense, indicative of a model's faithfulness to or dissent from the principles of the Prague School. In the second part of the paper we will therefore look (i) for certain elements that seem to be compatible with prototype theory, and (ii) for some key places in various schools of functional grammar where explicit reference is made to this theory.

The main thrust of the second part will be to examine, using specifically material from English, German, Croatian and Hungarian, whether an adequately constrained version of the prototype approach can be successfully applied to an account of syntactic function assignment in a Functional Grammar of the type proposed by Dik (henceforth FG).

1. On the functional core underlying prototype theory

1.1. Prototype theory: its tenets and assumptions

The last two decades or so have seen a steady rise in the popularity of the prototype approach in linguistics. It has come to be considered almost a panacea for linguistic problems of all kinds. In the course of the 1980's and the early 1990's we witnessed a regular prototype boom - a tentative bibliography (Brdar 1992) comprises well over 350 titles. Prototype theory is at the same time diversifying rapidly: so far it has been applied at various descriptive levels and in linguistic subdisciplines ranging from

phonology, morphology, syntax, and semantics to pragmatics. This is true not only of synchronic but also of some diachronic investigations. Prototypes have proved particularly useful in interdisciplinary fields such as sociolinguistics, ethnolinguistics, etc. Last but not least, the prototype approach is extending to more practical areas, ranging from lexicology and lexicography to translation theory and foreign language teaching.

The enthusiasm with which some linguists took up prototype theory and its rapid rise in the linguistic firmament might give the impression that it is superior to competing approaches. What is more, some linguists have come to overemphasize its importance and to use the term prototype linguistics. A word of warning is, in our opinion, in order here. We will try to show that prototype theory cannot be an integral language theory but at best only a basic component of the methodological apparatus of such a theory.

Although we are aware that providing a precise definition of the concept of prototype is not an easy task - as the growing body of literature amply testifies - we will here tacitly assume that the reader is familiar with at least some basic notions and assumptions of prototype theory. Since extensive discussion is quite beyond the scope of this paper we will deal here only with the minimum necessary to support our claims.

The central problem that the prototype approach seeks to solve is succintly summarized in the following statement:

> When describing categories analytically, most traditions of thought have treated category membership as a digital, all-or-none phenomenon. That is, much work in philosophy, psychology, linguistics, and anthropology assumes that categories are logical bounded entities, membership in which is defined by an item's possession of a simple set of criterial features, in which all instances possessing the criterial attributes have a full and equal degree of membership. In contrast, it has recently been argued ... that some natural categories are analog and must be represented logically in a manner which reflects their analog structure. (Rosch and Mervis 1975: 573-574)

Categories are supposed to have a radial structure, with the center or 'hub' of the category occupied by the category's best examples, i.e. by its prototype. Radiating outwards from the hub there are peripheral members of the category sharing some, but not all features exhibited by the prototype. They are taken to be poorer examples of that category. In other words, as one moves outwards from the centre, the degree of resemblance between the prototype and other category members gradually decreases. There are, eventually, such peripheral items that straddle categories, i.e. have dual category membership.

This basic position of prototype theory could be represented formally as follows:

A concept can be identified with a mental representation of a quadruple such as (*) $<A, d, p, c>$, where:

A is a conceptual domain including a certain set of readily envisionable objects;

d is a function from A x A into the positive real numbers called a metric distance, in which increasing pairwise dissimilarity is represented as increasing magnitude;

p is the prototype member of A, and

c is a function from A into [0, 1], called the concept's characteristic function, and such that the following two conditions hold:

a) $<A, d>$ is a metric space, i.e.

$(\forall x \in A)(\forall y \in A)$

i. $d(x, y) = 0$ iff $x = y$
ii. $d(x, y) = d(y, x)$
iii. $d(x, y) + d(y, z) \geq d(x, z)$

b) $(\forall x \in A)(\forall y \in A)$
$d(x, p) \leq d(y, p) \rightarrow c(y) \leq c(x)$

The characteristic function assigns numbers within the range 0 to 1 such that increasing distance from the prototype is represented by decreasing magnitude. In other words, the closer an object is to its prototype, the more characteristic it is of the concept.

This may be conveniently illustrated with the classical example, the concept *bird* as $(B, d_{bird}, p_{bird}, c_{bird}>$. B can be conceived of as the set of all readily envisionable birds, both real and imagined. The symbol d_{bird} is interpreted as a function on pairs of birds assigning greater numbers to dissimilar pairs (e.g. robin - penguin) than to similar ones (e.g. robin - sparrow). The symbol p_{bird} stands for some particular member of the set B which has values coming closest to the average on the different dimensions of the underlying metric space. Finally, the symbol c_{bird} is interpreted as representing the characteristicness function, i.e. the 'birdiness' of each instantiation, assigning numbers in [0, 1] to members of B.

It has been often pointed out that the concept of prototypicality is itself a prototypical concept (cf. Geeraerts 1988). It is usually described in terms of the following four typical characteristics:

1. prototypical categories cannot be defined by means of a single set of criterial (necessary and sufficient) attributes;

2. prototypical categories exhibit a family-resemblance structure;

3. prototypical categories exhibit degrees of category membership, i.e. not every member is in the same measure representative of a category;

4. prototypical categories have blurred or fuzzy edges.

It will be seen that these four characteristics are to a large degree interdependent.

Prototype linguistics is not a homogeneous paradigm such as e.g. current GB Theory or some of the models dissenting from earlier versions of TGG, like Lexical-Functional Grammar, Relational Grammar, Generalized Phrase Structure Grammar, etc. We could, in fact, at best say that the common denominator of works by authors subscribing to some version of prototype theory is that they all use a more or less well elaborated concept of prototype.

As soon as we apply ourselves to a precise formulation of the prototype concept underlying these studies, it turns out that there are at least two versions of the theory. Proponents of the milder version satisfy themselves with the statement that category membership is gradual rather than discrete, and that the prototype is characterized by the highest degree of category membership. In the stronger version, the prototype is taken to represent the cognitive basis of a category: it is not only claimed to be the member possessing the highest degree of membership but also that it is a mental concept belonging to the cognitive representation of the given category. The advocates of this position, mainly researchers working in interdisciplinary areas, are concerned primarily with accounting for how the human categorization and perception faculty operates. Whichever position we are inclined to adopt, prototypes undermine the centuries-old hegemony of the so-called classical (Aristotelian) theory of categorization.

The prototype theory revolution can thus be regarded as a reaction against the aporias and shortcomings inherent in the classical Aristotelian theory of categorization, and thus against the structuralist paradigm in general, from the Bloomfieldian school to various brands of transformational-generative grammar. Paradoxically enough, it will be shown below that some fundamental assumptions underlying prototype theory are, in fact, a rediscovery of some ideas propounded by the Prague structuralists.

1.2. Prototype theory and the Praguian centre-and-periphery conception: yet another case of a rediscovery procedure?

When it comes to providing some historical background on prototype theory, it is usually traced back to the research in cognitive psychology carried out by Rosch and her associates in the course of the early 1970's. Their research certainly had a catalytic impact, since it helped prototype

theory establish itself as an important interdisciplinary enterprise. However, it is self-evident that it did not feed from a single source but actually emerged as a unique case of convergence of a number of rather heterogeneous theoretical sources and rivulets. This prototype current has by now grown strong enough to claim the status of a theory, i.e. of a linguistic field in its own right, and to attract considerable metatheoretical attention. The fact that historians of linguistics are already busy tracing back its origins indicates that it is gradually coming of age.

There is also a remarkably high degree of unanimity of opinion in the literature regarding many other sources of the prototype approach. Ethnolinguistics (Berlin and Kay), fuzzy-set theory (Zadeh), studies by American sociolinguists concerned with variation patterns found in language (Labov, DeCamp), and the work of Wittgenstein, Popper, Putnam, etc., have invariably been highlighted as the most crucial factors determining the emergence and development of prototype theory.

Among its less often mentioned linguistic predecessors Janicki (1991) stresses the work in general semantics by Korzybski (1933), Hayakawa (1939, 1952, 1959, 1962), and Chase (1938).

One of the main tenets of Lipka's (1975: 111) discussion of the twists and turns characteristic of advance in linguistics is that progress may come from the rediscovery of 'old facts' and from the rediscovery of old theoretical constructs and models. We might as well argue that with the prototype boom we are witnessing just another flagrant instance of the latter sort of rediscovery.

In this section we will try to contribute further towards historical rectification and point out the often overlooked similarity between some basic assumptions of the Prague School and prototype theory. This fact has hardly ever been recognized in relevant literature: apart from Brdar Szabó (1991) we have been able to attest only two other studies in which this intellectual affinity was explicitly mentioned (Karlsson 1984, and Kempton 1981: 18). Oddly enough, the latter author, who points out the Prague Linguistic Circle's concern with vagueness and centre-and-periphery, is an ethnologist rather than a linguist.

A comparison of several well-known prototype studies - birds, by Rosch (1975); colours, by Berlin and Kay (1969); odd numbers, by Armstrong et al. (1983); and the Dutch word *vers* 'fresh', by Geeraerts (1988) - suggests that the third feature above, degrees of membership representativity, although not the only source of prototype effects, is probably the most frequent one. It is indicative that this characteristic is highly evocative of the Praguian idea of the centre-and-periphery of linguistic categories. A handful of quotations from Daneš (1966) will suffice to bear out this point, although a similar position characterizes a number of other works by Praguian scholars (cf. Karcevskij 1929; Neustupný 1961, 1966; Mathesius 1935, 1939; Skalička 1935; Vachek 1964; Popela 1966; Firbas 1966; Filipec 1966):

> The relation P[eriphery]-C[entre] may be, of course, established on various linguistic levels and on each of them it will display specific modifications. But the general essence of all its varieties may be characterized by the fact that the commonly found conception of the organization of language as a neatly patterned, symmetrical, regular, uniform system of units (of various ranks) is in principle false. (Daneš 1966: 9)

> The situation in which our analytic practice meets the difficulty or even impossibility to determine unambigously the place of the given item in the system, are very often connected with classing linguistic units with different categories. Mostly the difficulties lie in the assumption that each element contains all properties of the given category and that it contains them to the full extent (in other words, that the categories are clear-cut and unambiguously delimited). (Daneš 1966: 10)

> The system of language might thus be presented as space with an uneven density of elements, structured according to the principle 'Centre - Periphery - Transition', or as masses of centres with their 'fields of gravitation' (of various extent and power) which are in contact, mutually infiltrate one another and are hierarchically ordered... (Daneš 1966: 12)

> It appears that both in the synchronous functioning of language and in the dynamics of its development it is exactly groups of language units characterized by a certain set (complex) of features that play an important part. These groups act as centres of gravitation around which are grouped, at various distances, units which have some features common with these. To overlook this fact would make it impossible to assess the actual nature of the language system and of its functioning, and it would also contradict the speakers' linguistic intuitions. Should the analysis and classification be effected according to individual, simple criteria, it would result in scattered *débris* which would fail to give a true picture of the reality of language in its hierarchic and systematic relations, and would not do justice to the functioning of language. (Daneš 1966: 16)

This conception, which is clearly inspired by Karcevskij (1929), seems to surpass common prototype theory in stressing the dynamic character of these centres, i.e. prototypes. It is more cautious than most proponents of prototype theory who tend to overemphasize the fuzziness:

> Our conception does not, of course, deny the existence of classes or categories, but at the same time it does not force us into unambiguous decisions in those cases where the decision has not been made by the language itself (...). It strives to respect the dialectical character of the structural relations and allows to account for even multilateral

relations (thus the infiltration of peripheries may encompass more than two categories).... Finally, with the help of the terms C and P one can also characterize individual grammatical categories in terms of the varying degrees of their compact or, conversely, diffuse character. (Daneš 1966: 12)

1.3. Some shortcomings of prototype theory

Although the emergence of prototype theory has been widely hailed as a major breakthrough in lexical semantics and elsewhere, there is ample evidence that the prototype approach is not all-powerful and equally applicable to all areas. We can afford here only to discuss summarily some of its most evident inadequacies.

First of all, one tenet of prototype theory is that concepts and consequently word meanings are fuzzy, or at least do not always have sharp boundaries. However, some concepts, word meanings, and categories do have rather clear-cut boundaries, even if they exhibit radial structure. Wierzbicka (1990) discusses a number of examples of prototype-based studies creating an illusion that all concepts are fuzzy, which may lead to sheer absurdities. While not even all natural concepts succumb to the prototype approach, many nonnatural concepts do yield to it, resulting in rather bizarre conceptual domains: it is possible for an orthodox prototype-based study to use a single metric space to represent objects as diverse as birds, trees and cars. Cf. also Wierzbicka's (1990: 351) observation:

> Of course, if informants are specifically instructed to RANGE a set of given specific terms on a 'scale of birdiness', and if the set they are given includes both bats and cows, one can understand why they might decide to place bats above cows, but does this really establish that bats are thought of as having any degree of 'birdiness', that is it is impossible to draw a line between words for birds and words for things other than birds?

Secondly, one of fundamental problems with prototype theory is that there are 'many senses' to the notion prototype, and that, as Wierzbicka (1985: 343, 1990) has repeatedly stressed, it 'has been used in recent literature as a catch-all notion'.

What is more, the prototype approach is in many cases paid only lip service, i.e. the concept is used without much reflection, only because it is fashionable at present and/or to make up for lack of methodological rigour. Lakoff (1984: 1) argues that radial categories exhibit two kinds of prototype effects, i.e. exhibit them on two levels:

> One level of effects has to do with the radial structure of the category. Examples of the central [member] are better examples of the category than noncentral [members]. The other level has to do with the fact that each [member] in the category also shows prototype effects relative to

> the situations it must fit. Situations a [member] fits well are taken as better examples of the [member]; those it fits less well are taken as worse examples.

While this statement could be interpreted as laying emphasis on the fact that prototype effects are stronger in neutral contexts, and probably was intended in this sense, this distinction of two types of effects reveals something else as well: it may be used as a starting point for a discussion of various misunderstandings concerning the notion of prototype that occur in linguistic practice, particularly when it is applied in syntax.

Despite Rosch's warnings, a representational and a phenomenal conception of prototypicality have quite often been confused. The above distinction of two levels reminds one strongly of the traditional distinction between type and token. We could imagine an abstract, ideal proto-*type* of a category, i.e. of a construction, on the one hand, and proto-*tokens*, its best instantiations in actual language use on the other hand. One of the problems of many prototype-based studies is that the two levels are simply ignored. In linguistics, prototype theory has been used predominantly in lexical semantics where the empirical elicitation of proto-*typical* characteristics has been rather direct: linguistically naive subjects were asked to point out a focal example of blue, or the best exemplar of a boot or a cup, or to name a good exemplar of a bird. In other words, proto-*types* were arrived at by confronting subjects with proto-*tokens*.

This procedure is more difficult to use in more grammaticalized areas of language. It is out of the question to ask subjects about a prototype of direct object or transitive verb. We can, at best, hope to get judgements on proto-*tokens*, i.e. end up with a collection of proto-*tokens* or very good examples, but this may still be a long way from syntactic prototypes. Any attempt to compute a metric space based on such an arbitrary collection of proto-tokens is of questionable value, i.e. it need not necessarily result in a prototype. It cannot be our aim to establish whether *to hit* is, in numerical terms, according to our informants, only twice as transitive as *to read*, or as three times as transitive. We should instead try to detect features that make an NP a better or a worse example of a direct object of a given verb, i.e. try to arrive at an abstract prototype of a transitive construction. A syntactic proto-*type*, as opposed to proto-*tokens*, is thus a grammatical template, an abstract entity characterized by a high degree of specific features. The idea of computing metric spaces in morphosyntax appears therefore to be largely untenable.

Finally, there also seems to be some sort of confusion about the limitations of prototype theory. We have pointed out above that we do not believe that prototype theory may survive as an independent linguistic paradigm. It should rather be appreciated as just one, among several, descriptive procedures available for some phenomena.

A comparison with painting may be illuminating here. The term wet-on-wet is used to denote a way of painting when wet paint is applied over existing wet paint. Although it is common to all painting mediums, it is most intriguing and effective with watercolours. One of the points of similarity with prototype theory is that the results of its application are hard, almost impossible, to predict. Secondly, there are no sharp edges in the painting, all colours mix and form a continuum. It follows that this way of painting is particularly suitable for certain subject matters, e.g. for landscapes, but is hardly advisable in the case of working on a portrait. Finally, it will be seen that wet-on-wet is just a single technique that can be combined with other techniques, and not an artistic genre on an equal footing with music, sculpture, and all other kinds of painting.

Similar observations apply to prototype theory as well. While the prototype approach has met with considerable success in some areas it would be either methodologically clearly impracticable, or extremely labour-intensive in some other areas. It is just a descriptive procedure that can be combined with other procedures, but there is hardly any sense in trying to provide a prototype description of every phenomenon. It is not by chance that extant prototype-based studies are in fact sketches restricted to cover only specific problems. Extending it to all other areas would often result in simply too much beating about a bush which occasionally may be too sparse to hide anything worth the effort. Relying exclusively on prototype theory, i.e. insisting on prototype linguistics as a self-contained paradigm, may be rather detrimental. It is difficult to envision a grammatical description of a language based solely on prototype theory. Hence our argument for the prototype approach being embedded into various theoretical frameworks such as cognitive, functional grammar, etc. (with some of which it is more or less compatible), and against the very term *prototype linguistics*.

It is at present not only becoming clear that the devastating effect that prototype theory is supposed to have had on the classical conception of word meaning in fact did not materialize, but also that it can be satisfactorily incorporated into traditional semantic descriptions (cf. Schwarze 1982; Wierzbicka 1985, 1990; Lipka 1986, 1987, 1988, 1990; Kastovsky 1988; Kleiber 1990). These authors convincingly show that prototype theory and the so-called check-list theory of meaning are not true alternatives after all, i.e. there rather appears to be a division of labour between them.

In sum, the range of linguistic phenomena to which the notion of prototype could in principle be sensibly extended appears to be more restricted than we would at first sight (too optimistically, it turns out) be inclined to believe. Even its application in some limited areas was shown not to be free of methodological and practical troubles. Much prototype-inspired work can be traced back to conceptual confusion, inadequate attention to linguistic data, and last but not least, the wish to be 'up-to-date' at any price.

1.4. A modified version of prototype theory in syntax: once more on a pilgrimage to Prague

All these shortcomings of the prototype approach by no means imply that its general applicability in at least some areas is in doubt. As Wierzbicka (1990: 358) stresses, 'prototype doesn't save, but it can help if it is treated with caution and with care.' It may be useful when used as a specific analytic tool and not as a universal thought-saving device. On the whole, the positive aspects of the prototype approach justify putting some effort into tightening up the whole idea so as to produce a workable procedure in some syntactic comparisons (typological and/or contrastive).

First of all, it appears necessary that we appreciate the fact that the degrees of category membership and category boundaries, if possible, should not be subjected to any numerical interpretation in syntax. While retaining the general idea of the existence of central and peripheral members, we should abandon any idea of syntactic prototypes based on metric space and measuring this metric distance. We have already demonstrated that relying on native speakers' judgements of prototypical syntactic constructions, i.e. on the internal structure of linguistic systems, is simply impracticable, if not absurd.

Several dimensions along which this tightening up could be brought about were suggested by some scholars working within the Praguian framework. They were already aware of the practical problem that arises here, i.e. how to operationalize the notions of vagueness and centre and periphery in typological and contrastive studies. Daneš (1966: 14) admits that:

> It might be objected, of course, that the concepts C[entre] and P[eriphery],..., are not defined in exact terms but rather in an intuitive and symbolic manner. It is also obvious that with the lack of unequivocal criteria, enabling the researcher to arrive at clear yes-or-no decisions (necessitated by mathematical methods), one could hardly be able to exactly ascertain quantitatively the functional load of central and peripheral phenomena or their frequency of occurrence. One should thus try to arrive at a more exact formula in rendering the continuous transition found between C_1, P_1, P_2, C_2, or, to put the thing differently, to interpret the vagueness existing here in a non-vague manner.

The questionable notion of metric space may in morphosyntax, as Croft (1983, 1984) argues, be replaced by an extended notion of markedness - again a concept we owe to the Prague School.

Marking theory, which originated with Trubetzkoy's binary privative oppositions between phonological elements, was later successfully extended to morphosyntax by Jakobson. It is well-known that the unmarked member is morphologically simpler, relatively more frequent, and appears in neutralized contexts. This notion of markedness could be further extended to accommodate not only binary but n-ary oppositions as

well, where one member is unmarked and all the others are marked in certain ways:

$$C = \{ u, m_1, m_2 \ldots \}$$

Haiman and Thompson's (1984) study of clause-linking provides an example of such a procedure: parataxis is claimed to be the unmarked member and various types of hypotaxis such as finite and non-finite modifications, adverbial relations and complementation are marked.

A more radical extension of this approach is what Croft (1984: 54) terms 'relative markedness': in a category with paradigmatic elements, w, x, and y, x can be unmarked relative to y but marked relative to w, thus forming a markedness chain or hierarchy:

$$C = w < x < y < z \ldots$$

It should be pointed out that this hierarchy or order imposed on the elements may in some cases be only partial.

Finally, Croft proposes that an even more radical extension be made to marking theory which will allow it to cross category boundaries. This proposal is based on a notion introduced in Croft (1983: 82), viz. 'natural correlations' between subsystems:

	$Corr_1$	$Corr_2$...	
Cat_1	a	b	$<a,x>$, $<b,y>$ unmarked
Cat_2	x	y	$<a,y>$, $<b,x>$ marked

Instead of considering an element of a category as unmarked with respect to the other elements of the same category, elements from distinct categories can be correlated as unmarked relative to any other possible correlation of elements from these categories (Croft 1984: 55):

	'subject'	'object'
Discourse Salience	protagonist	antagonist
Thematic Role	agent	patient
'Control'	volitional	affected
Animacy	animate	inanimate

Topicality, agentivity, volitionality, and animacy correlate to provide the maximally unmarked subject. Traditional markedness and hierarchies are argued to be special cases where the number of categories under consideration is one. By taking these natural correlations of elements together where the number of categories under investigation exceeds one, we arrive at a morphosyntactic prototype. In other words, linguistic prototypes are characterized as morphosyntactically maximally unmarked, i.e. natural correlations. Unnatural, nonprototypical correlations are

marked and tend to get assimilated by nearby prototypes.

2. Applying prototype theory to Functional Grammar

2.1. Accounting for vagueness and non-discreteness in functional frameworks

There is enough evidence that most linguists subscribing to the functionalist view of language are largely aware of this fuzziness and the continuum between centre and periphery. Thus Halliday, McIntosh and Strevens (1964: 196) stress that "not all items are either fully grammatical, or fully lexical; there is a scale between these extremes and some items fall more towards one polarity than the others." And Halliday (1985: xxxiii) points out that there is a general principle in language that the easier a thing is to recognize, the more trivial it is likely to be, and that the outward sign of a semantically significant category is usually not simple or clear-cut.

It should be stressed here, before we embark on what will be an analysis of Object assignment, that Croft's treatment of subjects and objects, as characterized above, is clearly evocative of the treatment of these syntactic functions in Dik (1980b: 50), where it is argued that an Agent is a term that is more prominent than a non-Agent term, that a Subject is more prominent than an Object at the syntactic level, and that a Topic or Focus is more prominent than a non-Topic or non-Focus at the pragmatic level. Quite often the three sorts of prominence or unmarkedness coincide, thus producing a prototypical instance of Subject. This example once more clearly indicates that Dik's model implicitly integrates some elements of the centre-and-periphery approach and is thus compatible with our modified prototype approach as well.

It is also claimed in Dik (1980b: 48) that FG 'follows the Prague conception of language as a system in which more nuclear and more peripheral elements can be discerned', while rules and principles of grammar are said to 'often have the character of tendencies which can operate with varying strength, rather than of absolute rules with yes-or-no conditions of application.' The same basic idea permeates Dik's (1989: 72ff.) discussion of the difference between arguments and satellites, particularly between arguments and Level 1 satellites. A number of similar observations and pleas for a multi-level approach to syntactic functions elsewhere in Dik (1989) could be adduced as further illustrations here but will be discussed later.

In addition to the above, it should be recognized that the concept of markedness plays an extremely important role in all the successive stages of Dik's theory, and particularly in Dik (1989: 38ff.).

Some functionalists have even gone a step further. We note, in fact, several attempts to incorporate some version of prototype theory into functional grammar. Givón (1984 and 1990) provides an example of a relatively self-contained functional framework relying heavily on

prototypes. Dik's type of functional grammar has not remained untouched by the prototype tide either, as Goossens (1990), Schulze (1989), and Keizer (1992) show.

2.2. Syntactic function assignment as an area in Functional Grammar that is amenable to the prototype approach

This brings us to a more data-based part of our paper, in which we will try to point out at least one area in FG that seems to be amenable to the prototype approach. We propose to discuss the assignment of the syntactic function Object. Illustrations will come from English, German, Croatian, and Hungarian.

It has been already pointed out that Croft's prototype treatment of subjects and objects above is very similar to Dik's. It is our aim here to show that the prototype approach can be used even more extensively when dealing with the syntactic function Object within this model. It appears that the distinction between arguments and satellites in this model (roughly equivalent to complements and adjuncts in traditional terms, or *Ergänzung* and *Angabe* in Engel- or Helbig-style dependency grammar) might be another topic that would yield to prototype treatment. It will be seen in the end that the two, Object assignment and the argument-satellite distinction, are in fact intricately linked.

A relatively safe position to assume at the outset of this section would be to repeat the claims found quite often in functionalist literature (e.g. Dik 1980a: 128f.) that notions such as Subject or Object are relevant in a grammatical description of a given language if it can be shown that this grammatical function is assigned not only to the default semantic role - in the case of Object it is Goal - but to some other semantic roles as well in a systematic fashion, a syntactic function thus being relevant if exhibiting some marked, non-prototypical instances as well.

Restating this in semantic terms, we could say that Object function is relevant if it is semantically diverse. A tentative step further in the same direction would be to assume that a given syntactic function then appears to be the more relevant, the more semantic roles it can encode, i.e. the more diffuse it is in semantic terms, of course provided it is legitimate to speak of syntactic functions as being more or less relevant. It is our contention that this is indeed a legitimate and sensible course for a functional grammarian to take.

One of the most striking developments concerning the assignment of syntactic functions in the most recent version of FG (Dik 1989) is the general tendency towards a more unified account of both syntactic functions. It is explicitly and implicitly stressed throughout Dik (1989) that the different examples of Subj- and Obj-assignment are far from randomly spread across languages and that there is a common pattern in the variation found (cf. Dik 1989: 219 and 236). Languages are claimed to vary from no Subj- and Obj-assignment at all to maximal exploitation of the two strategies. In between we find the orderly progression of a typological hierarchy. The operation of Obj-assignment is in fact argued

to be dependent on Subj relevance in a given language.

The possibilities could be summarized, following De Groot (1989: 97), in the following implicational scale:

(1)	Subj	Obj
language type 1	+	+
language type 2	+	-
language type 3	-	-

So far we have tacitly assumed that the assignment of a given syntactic role may be relevant or irrelevant for a specific language. We should now briefly turn our attention to the question of the relevance of syntactic functions in general.

Broadly speaking, there are two mutually opposed views on the nature of syntactic notions such as subject and object. They can be taken to be primitives, i.e. axiomatic, non-defined/non-definable elements (as e.g. in Relational Grammar), or, on the other hand, to be derived notions, exponents or functions.

Provided they indeed have an axiomatic status, it is reasonable to assume that these notions are relevant cross-linguistically, because they are basic, i.e. the whole description rests on them.

If we subscribe to the latter position, we are consequently faced with the question of a reliable set of criterial properties for objecthood. We can choose to define objects on one level of description only (as e.g. happens in the Chomskyan generative paradigm, where object is, loosely speaking, defined in configurational terms; cf. Chomsky 1965 for an early account). We can, on the other hand, recognizing their complexity, try to make our definition a multi-level one. The exact number of levels and the choice of distinctions that appear necessary for a satisfactory definition is still a matter of wide dispute (cf., among others, studies in Plank 1984, and Plank 1990).

It is claimed, as we have already pointed out, in all the successive stages through which the theory of Functional Grammar has so far gone that there are languages for which the assignment of the Object function is irrelevant, since this function is restricted to Goals. In other words, everything that could be said in terms of the syntactic function Object could also be said in terms of the semantic function Goal.

The same phenomenon of access of various semantic roles to direct objecthood, although with a very different theoretical impact (grammatical relations are considered to be primitives), is not alien even to Relational Grammar, where it is captured in the notion of Promotion to Direct Object (Chung 1975, 1976), which is defined as the 'placing, by whatever grammatical means, of a *non-patient object* into the position of direct object, whose grammatical coding (most commonly by morphology) is otherwise characteristic of patient objects'.

A similar situation obtains in Givón (1984: 138), where direct-object is relevant only if semantic case roles other than the patient have regular

'access' to that role. However, when the direct-object has a semantic role distinct from that of patient, there may arise the so-called functional dilemma (Givón 1984:169):

Functional dilemma in objectization
How to express simultaneously the *semantic* case-role of an argument and its *pragmatic* case-role as secondary topic (i.e. DO).

The solution of this dilemma, i.e. combinations of coding devices such as word-order, morphology and intonation characteristic of particular languages, provides the basis for Givón's typology of objectivization.

One point common to the above functional approaches should be underlined: it is important to note that the access of semantic roles other than patient/Goal to objecthood is regular, i.e. fairly productive in the syntactic sense of this term, which also means that it is not random but systematic. In other words, semantic roles may be hierarchized on a cross-linguistically valid scale according to the probability of their surfacing as objects. Such hierarchies have been referred to as Natural Topic Hierarchies, i.e. specifically as Topic hierarchies (Hawkinson and Hyman 1974, Givón 1976, 1984) or as Semantic Function Hierarchies (Dik 1978, 1980a, 1989). They are similar to Keenan and Comrie's (1977) Accessibility Hierarchy, although the latter is stated in terms of grammatical relations.

The hierarchy operative in the case of direct objecthood accessibility offered by Givón (1984:169) is identical to the one governing the access to subjecthood except for the fact that the agent role is eliminated as being irrelevant:

(2) DAT/BEN > PAT > LOC > INSTR/ASSOC > MANN

Dik (1978: ch 5, 1980: ch. 6) generalizes the cross-linguistic possibilities for Subject and Object assignment in the following diagram:

(3)

	Agent		Goal		Rec		Ben		Instr		Loc		Time
Subj	+	>	+	>	+	>	+	>	+	>	+	>	+
Obj			+	>	+	>	+	>	+	>	+	>	+

This shows that Agent terms are the most likely candidates for Subject assignment, whereas Goal terms are best candidates for Object assignment. But it is also clear from the diagram that the assignment of these syntactic functions is not restricted to these two semantic functions respectively. Both syntactic functions can be assigned to semantic functions stretching to the right from the default values on the hierarchy. It is stipulated that languages differ with respect to the depth to which they penetrate the Semantic Function Hierarchy (SFH) for Subject and Object assignment but that this penetration is continuous. This means that if in a given language the Object function is in certain cases assigned to

Instrumental, it may be assigned to Goals, Recipients and Beneficiaries as well. The more a language goes to the right on this hierarchy, the more difficult and marked becomes the assignment of syntactic functions, i.e. it results in less prototypical instances of syntactic functions.

One rather obvious difference between the two hierarchies, apart from the terminology (Givón's DAT being roughly equivalent to Dik's Rec), is the relative position of various roles, the most striking being the reversal of the position of the dative/beneficiary (i.e. Recipient) and the patient role. Givón's hierarchy suggests that recipients and beneficiaries would provide unmarked or prototypical direct objects, but this does not prevent him from stating elsewehere in his book that patient objects should be regarded as prototypical direct objects.

Another point of divergence between the two functional approaches to the assignment of subjects and objects is that Dik is more specific on the contribution of the syntactic functions to the interpretation of a sentence. In accordance with the overall prominence of semantic functions in the model of Functional Grammar presented in Dik (1978 and 1980a), syntactic functions are interpreted as being neutral with respect to their contribution to the definition of the State of Affairs designated by the predication as such. They are relevant for the way in which this State of Affairs is presented. In other words, their assignment to a particular term determines the point of view from which the predication is described. This means that any alternative assignment of syntactic functions may not tamper with the propositional meaning of the sentence specified by the first layer of functional specification.

The "cut-off point" for Object assignment in English is demonstrated by Dik (1980a: 14f.) to be after Beneficiary:

(4) John bought Mary$_{(BenObj)}$ a drink.

whereas there are languages for which the assignment of this function is irrelevant, since it is virtually restricted to Goals, Croatian and Hungarian being claimed to provide examples of the latter type (Dik and Gvozdanović 1981, De Groot 1981).

The practical procedure used in Dik (1989) to check whether English and German have a distinctive operation of Obj-assignment or not is illustrated by reference to a single construction type, exemplified on pairs of sentences with dative alternation in English and German repeated here as (5-6) a. and b.:

(5) a. The boy gave the flowers to the girl
b. The boy gave the girl the flowers

(6) a. Der Junge gab die Blumen dem Mädchen
b. Der Junge gab dem Mädchen die Blumen

German, unlike English, does not allow two ways of presenting this situation. The difference between (6) a. and b. can be explained in terms

of alternative placement rules. The act of giving is in both sentences represented iconically, whereas in (5) a. and b. it is alternatively expressed according to the relative prominence of the participants.

In Kučanda (1984) and Brdar (forthc.) it is argued, contrary to Dik and Gvozdanović, that there are at least some cases of dative alternation in Croatian, thus providing evidence that Croatian marginally meets the proposed requirement and that it cannot be unequivocally classified as a non-Obj-assigning language within the model developed in Dik (1989):

(7)a. $Oni_{(Ag\ Subj)}$ su $Ivana_{(Rec\ Obj)}$ ponudili
$they_{nom}$ aux $Ivan_{acc}$ offered

bijelim $vinom_{(Go)}$
white $wine_{instr}$

'They offered Ivan white wine'

b. $Oni_{(Ag\ Subj)}$ su $Ivanu_{(Rec)}$ ponudili
$they_{nom}$ aux $Ivan_{dat}$ offered

bijelo $vino_{(Go)}$
white $wine_{acc}$

'They offered white wine to Ivan'

Hungarian clearly lacks comparable constructions.

Such an approach to Object assignment is clearly bound to produce some undesirable consequences, particularly if the apparent tendency towards its more precise (but at the same time more rigid) formalization is to continue. While in the previous models we were in a somewhat better position (because we had at least three criteria at our disposal to determine whether Object assignment is relevant or not) we definitely have difficulties in accounting for degrees of relevance by means of a single criterion. The model is too rigid because it seems to allow only an either-or answer.

It appears clear at this point that all the facts suggest a multi-facet approach. A simple dichotomous distinction between Object assigning and non-Object-assigning languages does not appear to be fine enough to capture what seems to be a scale or hierarchy of Object relevance. On the one hand, there is English, in which this syntactic function is relevant; on the other hand, Object is claimed to be equally irrelevant in German, Croatian and Hungarian, a situation which is intuitively felt to be counterproductive. There seems to be simply too little typological space for the latter group of languages - there should be some way to account for the differences concerning the degree of Object relevance in these languages.

Before turning away from the model under investigation to find some outside solutions, we should, of course, meticulously check the

theory-internal potential for modifications. Indeed, very soon we find that there are some new elements in Dik (1989) that are significantly different from the earlier version. Certain of these shifts can, unfortunately, be shown to run contrary to the very core of the functional approach to linguistic phenomena and are, actually, in conflict with some other, more promising innovations.

First of all, we have noted the unfortunate reduction in the number of criteria. On the positive side, we note a plea for a multi-factor approach to syntactic functions. It is suggested (Dik 1989: 235) that accessibility to Subjecthood and Objecthood cannot be one-dimensionally defined in terms of semantic functions. A pluri-dimensional, "multi-factor" approach is required, in which different parameter values may contribute to the relative accessibility of a term to Subject and Object assignment. This seems to be in line with the view expressed *en passant* by Dik (1989: 215, footnote 8), following Kučanda (1984), that Subject assignment may after all be marginally relevant in an FG of Croatian. This is significant because it offers some hope of transcending the rigid either-or approach. Let us, however, see how these proposals fare in descriptive practice.

Discussing the relevance of Subject assignment in general, Dik (1989: 219f.) postulates that it is relevant for a language only if that language has a regular opposition between active and corresponding passive constructions. Alternative expression of the same State of Affairs is a necessary but not a sufficient condition for recognizing an active-passive opposition: in the passive construction, some non-first argument must have acquired the coding and behavioural properties which characterize the first argument in the active. The relevant coding properties in English are: occurrence in positions reserved for Subjects; no prepositional marking; nominative case (if pronominal), and agreement in person and number with the finite verb. The behavioural properties in the sense of Keenan (1976) are related to grammatical processes and constructions typically sensitive to the Subject function, e.g. reflexivization, relativization, control phenomena in infinitival complements and participial constructions, and the existence of raising constructions (Dik 1989: 221ff.). Object assignment is to be treated in a similar fashion: analogous criteria should apply, i.e. identity of States of Affairs, and sharing of coding and behavioural properties with the second argument of the active construction.

However, the whole issue of Object assignment is, in comparison with Subject assignment, dealt with in a brief and rather vague manner. It is in particular not clear which coding and behavioural properties are meant. We could, with a high degree of certainty, make guesses about some of them for English, such as occurrence in positions reserved for Objects, no prepositional marking, accusative i.e. objective marking for pronominal objects, etc.

Another important recent contribution towards a better understanding of syntactic functions in FG is De Groot's (1989: 97) proposal to consider their relevance at various levels of analysis and thus establish

holistic typologies. A syntactic function may turn out to be relevant in a language in all domains or just at the level of finite predications but not at other levels.

Bearing in mind the basic functional maxim that the description and explanation of language facts have primacy over methodological issues, a possible way out of this stalemate between theoretical pleas and descriptive practice would be to recognize that, in order to do justice to Object assignment in various languages, and its various degrees of relevance, we do not need fewer, but more criteria. As one such additional criterion we suggest that possibilities for marginal syntactic function assignment be studied, i.e. their overall prominence as typological phenomena.

2.3. Some non-prototypical or marginal objects in English, German, Croatian and Hungarian

It is our task in the remaining part of the paper to show that the milder version of the prototype approach outlined above can be successfully used to provide a more satisfactory account of the relevance of the syntactic function Object within this functional framework, particularly when dealing with some cases of marginal accessibility to Objecthood, i.e. with some non-Goal-like, non-prototypical Objects. This additional parameter can help us further in modelling the postulated typological space.

This requires that we study, in some detail, Object assignment rules in specific languages and try to check whether the theory of FG as presently formulated in Dik (1989) allows this syntactic function to vary in its relevance. Specifically, we will try to see whether a cut-off point for Object assignment can indeed be established, and if such is the case, investigate where these points for various languages are, i.e. find out which semantic roles are out of bounds for Object assignment. Admittedly, our idea of Object assignment and its relevance will be somewhat heretical from the viewpoint of the mainstream Amsterdam school, but we will try to show that it is in accord with some basic premisses of the functional approach to linguistic data.

In some of the cases to be discussed there seems to exist a more or less regular opposition between prepositional phrases containing an instrument noun, locative noun, etc., as the head, and an Object-like NP, i.e. a prepositionless term (in which the semantic function is neutralized or masked as to marking). These alternative renderings seem to satisfy the condition that the States of Affairs presented in them be otherwise identical. We will first consider what are by some traditionally oriented authors termed (a) instrumental and (b) locative objects, and then conclude with (c) cognate objects.

These phenomena deserve without doubt more detailed studies, both monolingual and comparative. We have to satisfy ourselves here with a mere sketch of the range of possibilities that the four languages exhibit, but this will, hopefully, be enough to support our claims.

Instruments as objects

Instrumental objects may be summarily defined as prepositionless NPs following verbs of motion and denoting parts of the body or objects kept in them. While instrument terms in English are usually introduced by a preposition such as *with*, there is at least one class of instrument terms that may be coded as Objects, that is, assume the form of prepositionless NPs. Cf. the following examples:

(8) Humboldt waved (*with) his hands at me.

(9) Nobody believes that anyone can come along and wave a wand and turn you into a frog.

With a handful of motion verbs there is an opposition between prepositionally marked and prepositionless instrument terms:

(10) The girl sat twiddling (with) her hair.

(11) Stop twiddling (with) your pencil!

It is interesting to note that most German and Croatian instrument terms cannot be coded as Objects, i.e. they are introduced by the preposition *mit* in German (12-13), or stand in the instrumental case (with or without a preposition) in Croatian (14-15). Hungarian (16-17), on the other hand, allows both accusative NPs and NPs marked by the *-val/vel* suffix (roughly equivalent to instrumental), but there are no oppositions of the above type:

(12) Peter winkt mit der Hand.
Peter waves with the hand

(13) Der Hund wedelt mit dem Schwanz.
the dog wags with the tail

(14) Petar mase rukom.
Peter waves hand-inst

(15) Pas mase repom.
dog wags tail-instr

(16) Péter integet a kezével.
Peter waves the hand-his-with

(17) A kutya csóválja a farkát.
the dog wags the tail-his-acc

Locatives as objects

There are, of course, a vast number of noun phrases in any language denoting places (areas, points, or paths) that appear more or less freely as Objects or adverbials with verbs of movement. As far as the syntactic behaviour of verbs of movement is concerned, they are rather heterogeneous. Some of them are syntactically intransitive, some transitive, whereas some can be construed both as intransitive and transitive. By way of illustration consider the following examples from English:

(18) The boy entered the hall.

(19) He often walked (in) these fields.

(20) He swam (across) the Channel.

The type of contrast exemplified by sentences (19-20) will be the focus of our attention here. *To swim* is basically an intransitive verb of motion with one argument performing the activity, the swimmer, and an adverbial phrase, usually a prepositional phrase, indicating the place or the path that the activity follows. It is possible in certain cases for this path-indicating preposition to be incorporated into the verb, neutralized or absorbed by it, *swim* thus becoming a surface transitive verb. This is borne out by the fact that it passes certain tests that are supposed to filter out Object-like non-prepositional complements of quasi-transitive verbs. The Object-like NP, *the Channel*, can be passivized:

(20) b. The Channel has been swum.

While there are a number of verbs that behave in this fashion (e.g. *fly*), this process cannot be said to be fully productive:

(21) a. The child crawled across the floor.

b. *The child crawled the floor.

Even with *swim* and *fly* this is possible only under specific conditions: the act of swimming or flying must be seen as some sort of feat. This requires either that the locative object be something bigger than a swimming pool or a small brook or that the agent be someone for whom swimming or flying over this obstacle can be viewed as an outstanding achievement, or both:

(22) ?He swam our new swimming pool.

It is significant that there are considerable differences between the four languages in the productivity of this construction. It appears that in

English locative marking can be more readily neutralized than in the other three, i.e. that there are, on the whole, more instances of alternative rendering.

German can definitely boast fewer instances of locative objects. There are path-indicating NPs such as *Strecke*, *Weg*, or *Straße*:

(23)

Unser	Kapitän	fliegt	oft	diese/	auf	dieser	Strecke
our	captain	flies	often	this-acc	on	this-dat	route

(24)

Diesen/	auf	diesem	Weg	bin	ich	noch	nie	gegangen
this-acc	on	this-dat	way	aux	I	yet	never	gone

König and Nickel (1970: 77), dealing with what they call reduction of prepositional objects to direct objects, claim that German equivalent verbs retain the preposition if the adverbial does not refer to direction:

(25) They were cruising (in) the Caribbean.

(26)

Sie	kreuzten	durch/(*0)	das	Karibische Meer.
they	cruised	through	the	Caribbean

However, they point out that the preposition can be 'incorporated' morphologically into the verb in German if the prepositional phrase is one denoting direction, thus producing a prefixed transitive verb (this prefix being either fixed or movable) - a situation we might as well view as the existence of parallel predicates. Cf.:

(27) He leaped over the fence.

(28)

Er	übersprang	den	Zaun.
he	over-leaped	the	fence

Note that in Croatian (29) and Hungarian (30-32) we find a number of prefixed motion verbs (similar to *überspringen* in German above) taking accusative locative NPs:

(29) a.

Preplivao	je	Jadran rijeku bazen
over-swam-3ps.sg	aux	Adriatic-acc river-acc pool-acc

b.

?*Plivao	je	Jadran.
swam-3ps.sg	aux	Adriatic-acc

(30) A gyerek átuszta a Balatont
a folyót
the kid over-swam the Balaton-acc
the river-acc

(31) ?*Fát másztam.
tree-acc climbed-1ps.sg.

(32) *Felmásztam a fát.
up-climbed-1ps.sg. the tree-acc

It is, however, possible, unlike in German, for such prefixed verbs to have a prepositional phrase or a non-accusative case form as well, which shows that the verb-prefix is not an incorporated direction-indicating preposition but rather a signal for the completion of the action.

(33) Preplivao sam preko rijeke.
over-swam-3ps.sg. aux over river

(34) Felmásztam a kerítésre.
up-climbed-1ps.sg. the fence-on

(35) A gyerek átúszott a folyón.
the kid over-swam the river-on

We witness here once more that not only in English, but in the other three languages as well, some non-Goal-NPs can be coded as Objects, but of course there is considerable cross-linguistic variation in the productivity of this construction type.

Cognate objects

Finally, let us consider a structure that is traditionally called the cognate object. It is quite widespread, as is borne out in the following illustrations:

(36) Montag grinned the fierce grin of all men singed and driven back by flame.

(37) Er starb einen milden Tod.
he died a-acc peaceful-acc death
'He died a peaceful death'

(38) Put putuju.
journey-acc they-journey
'They are travelling'

(39) Hösi halált halt.
heroic death-acc died
'He died a hero's death'

The very term 'cognate' suggests that the NP in question repeats the contents of the verb. The new piece of information it carries is often contained in the modification. Cognate objects thus, in a sense, denote the manner in which the given activity is performed. Hence, we may tentatively argue that cognate objects are instances of objectivization of the semantic function Manner. It is indicative that we find paraphrases like:

(36) b. Montag grinned fiercely like all men singed and driven back by flame.

Significantly enough, the productivity of cognate objects declines as we leave the Germanic family of languages. Though the cognate-object pattern is available in some cases, most Croatian (40) and Hungarian (41) equivalents of English or German cognate objects are quite transparent concerning their semantic function:

(40) a. Umro je junackom smrcu
died-3ps.sg aux heroic-instr death-inst

b. Umro je kao junak.
died-3ps.sg. aux as/like hero

c. *Umro je junacku smrt.
died-ps.sg aux heroic death-acc

(41) b. Hösként halt meg.
hero-like died-3ps.sg. prefix

c. Ugy halt meg mint egy hös.
so died-3ps.sg. prefix like a hero

They are coded by the instrumental case in Croatian, or assume the form of phrases headed by *kao*, i.e. *-ként* or *min* in Hungarian (both meaning 'as/like').

3. Summing up

The 'alternative' forms of expression (at least some for every language) which we have shown so far might be argued to have some undesirable implications for the theory of Functional Grammar as far as syntactic function assignment is concerned.

If the above object-like items in the four languages can indeed be taken as some sort of objects, and this is what has been maintained by

many generations of linguists and is intuitively sensible, cut-off points for Object assignment are not easy to establish. It would appear that there are some more or less marginal possibilities for it after the primary cut-off point and that the productivity of Object assignment is a matter of a cline. It should be stressed that there are also other types of marginal Objects which we were not able to illustrate here. It would also be rewarding to investigate Object-like constituents in complex verbo-nominal expressions of the type *take a look* in English and their equivalents in other languages.

Secondly, what we have observed implies that some non-arguments (Manner, Instrumental) are also marginally eligible for Object assignment. This is, in its own right, not too detrimental, as such possibilies were hinted at by Dik (1989).

A clearly less welcome consequence is the fact that syntactic function assignment may then appear to be discontinuous. What is more, the whole typology of syntactic function seems to be in danger, because the implicational scale underlying it does not work: if it is true that Subject assignment is irrelevant in Croatian and Hungarian (cf. Dik and Gvozdanović, and De Groot, cited above), can we then expect Object assignment to be even marginally relevant?

A possible way out is suggested in Goossens (1990), where it is claimed that the key to a better understanding of transitivity lies in the notion of extended Goal prototype. We could, in fact, argue that the Object-like items we have discussed are reclassified as Goals, i.e. that they are less prototypical members of the Goal family. The degree of family resemblance may vary with different types of constructions. By claiming that these terms have a dual membership, that is, that they are both Goal-like and Instrumental- or Locative-like, etc., syntactic function assignment is no longer as discontinuous as it seemed at first sight. It would be useful here to call the reader's attention to the revised SFH (Dik 1989: 234) into which the notions A^1 and A^2 are integrated:

(41) A^1 > A^2 > Rec > Ben ...

Ag	Go
Pos	Rec
Fo	Ben
Proc	Inst
Zero	etc.

Dik (1989: 233f.) assumes A^1 and A^2 to be cover-all names for the classes of first and second arguments respectively. The sets of semantic roles within A^1 and A^2 are internally unordered. These notions turned out to be necessary for a number of reasons. A^1 as a generalized 'first argument' may be useful in accounting for the agreement phenomena in languages such as Hungarian (which has both agreement between 'subject' and verb, and 'object' and verb) or Croatian (subject-verb), which were claimed to have no syntactic function assignment. Secondly,

Mulder (1988) suggested on the basis of data from Ancient Greek that the notion of A^2 should be used to explain the behaviour of certain two-place verbs. Most of them have accusative second arguments, presumably Goals, which can be passivized. There are, however, some two-place verbs like *boetho* 'help' taking dative second arguments which can be passivized, too. We might be tempted to consider these arguments Goals as well, but Mulder shows that in many other respects they behave like Recipients, which are normally not passivizable. It appears thus that Subject assignment in passive is possible for some non-Goals as well, i.e. for the extended Goal category.

It could be claimed that the A^2 set, in fact, also formalizes the observed prototype effect, viz. the extension of Goal in the case of marginal Object assignment. It is worth pointing out a recent proposal by Dowty (1991) along similar lines (but cast within a more generatively oriented framework). He suggests that the problem of argument selection be solved by abandoning the traditional system of a number of discrete semantic roles and replacing it by a set of two cluster-concepts only, proto-Agent and proto-Patient.

At the same time this, in a sense, relativizes the strict distinction between arguments and satellites, if it can be maintained at all. It is more realistic, however, to assume the existence of prototypical arguments (complements) and prototypical cases of satellites (adjuncts), and a continuum of more or less complement-like viz. adjunct-like constituents in between (cf. Vater 1978; Hesse 1978; Brdar 1988: 67f.).

It turns out then that prototype structures are useful at least at two levels here: they facilitate generalizations about category membership at the level of semantic functions, and this is then reflected at the level of syntactic function assignment and accounts of degrees of their relevance. It is conceivable that they may also be useful in describing diachronic changes of predicate-argument structure, e.g. in tracing back the spread of the transitive pattern S-V-O in contemporary English and related changes in subcategorization frames.

By providing an additional parameter in the attempt to find out how far marginal Object assignment can go, these prototype structures together with other suggestions in the most recent version of FG, particularly when the multi-facet approach to syntactic functions is more precisely worked out, will allow us more typological space. We could now account more finely for the cross-linguistic variation pattern, i.e. for the shades between Object relevance and irrelevance for German, Croatian, and Hungarian, and possibly for a number of other languages as well.

By way of conclusion, we might say:

i. that we have not only pointed out the similarity between prototype theory and the Praguian centre-and-periphery approach, but also shown that the gist of prototype theory is very functionally oriented in its nature.

ii. that we have demonstrated the usefulness of a modified prototype approach in a functional framework such as Dik's.

Even if our rather liberal treatment of syntactic functions in the four languages is rejected, we hope that our modest proposal may turn out to be worth considering in a broader cross-linguistic perspective, i.e. if in some language we should come across some more cases of marginal Object assignment.

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