Meaning and Grammar

Cross-Linguistic Perspectives

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Non-verbal predicability[1]

Kees Hengeveld

1. Introduction

The relations between locative, existential, possessive and other constructions based on non-verbal predicates have received considerable attention during the last two decades (e. g., Lyons 1968; Clark 1978; Bickerton 1981; Wilson 1983). The major concern of these studies was to determine to what extent the overlap in lexicalization of these constructions is systematic, and to find explanations for these overlaps. It was more or less taken for granted that constructions expressing locative, existential, etc. meaning can be viewed as locative, existential, etc., constructions. A few examples will show that this is not always the case. In Yagaria, adjectives cannot be applied predicatively. In order to predicate properties of an object, speakers of Yagaria have to construe a noun phrase within which the adjective is applied attributively to a head noun. This noun phrase is then applied predicatively in a classifying or equative construction. For instance, the adjective *okavu* 'blue' in (1) is turned into a noun phrase by applying it to the dummy noun *na* 'one, thing'. This noun phrase serves as the predicate of the construction. Only in this way can the property 'blue' be predicated of an object in Yagaria.

Yagaria (Indo-Pacific, Renck 1975)

(1)   *ma-gaveda   okavu'-na*
          DEM-string   blue-NOM
          'This string is (a) blue (one).'

This is just one of the many examples in which the lack of a certain construction type, in this case a property assigning construction, is remedied by an alternative construction, in this case an equative construction.

   Another example involves the expression of possessive and existential meaning in Fijian:

Fijian (Austronesian, Milner 1956)

(2) a.   *e   dua   na   nona   waqa*
          PRED   one   ART   his   canoe
          'He has a canoe.' ("His canoe is one.")

b.   *e   rua   na   nona   waqa*
       PRED two   ART his   canoe
       'He has two canoes.' ("His canoes are two.")

(3)   *e   so   na   wai*
       PRED little   ART water
       'There is a little water.' ("The water is a little.")

Possession or existence of an indefinite object is expressed in Fijian by applying a quantifier as a predicate to a term which may contain a restrictor indicating the possessor. These examples show that Fijian has constructions expressing possessive and existential meaning, but that it does not have possessive and existential constructions in the narrower sense of the term.

The aim of this paper is to investigate the extent to which languages make use of non-verbal predication types in this narrower sense. In order to do so I first define the non-verbal predication types that will be investigated in terms of the Functional Grammar approach to non-verbal predication, as proposed in Dik (1980).[2] Secondly, I try to determine how these non-verbal predication types can be recognized. Thirdly, I show that the extent to which languages make use of non-verbal predication can be described in terms of a number of hierarchies, and finally I try to find some explanations for the existence of these hierarchies.

2. Non-verbal predicates in Functional Grammar

In Functional Grammar underlying predications are built on the basis of predicate frames. Verbs, adjectives, and nouns are all represented in the lexicon according to the same format, of which some examples are given in (4)–(6).

(4) $give_V (x_1)_{Ag} (x_2)_{Go} (x_3)_{Rec}$
(5) $intelligent_A (x_1)_{\emptyset}$
(6) $carpenter_N (x_1)_{\emptyset}$

The verbal predicate *give* in (4) has three argument positions, provided with the semantic functions *Agent*, *Goal* and *Recipient*. The adjectival predicate *intelligent* in (5) has one argument position, provided with the semantic function *Zero*, and so has the nominal predicate *carpenter* in (6). In order to form a predication, terms are inserted in the argument positions of these

predicate frames. This leads to an underlying structure like (7) in the case of adjectival predicates:

(7) $intelligent_A (d1x_i: carpenter_N (x_i)_{\emptyset})_{\emptyset}$
       'The carpenter (is) intelligent.'

In (7) the adjectival predicate *intelligent* is applied to a term referring to a definite (d) singular (1) entity x_1 which has the property *carpenter*. Note that the inserted term is itself construed on the basis of a predicate frame, and that the underlying predication does not contain a copula. Copulas are considered to be semantically empty supportive devices, which are introduced by a copula-support rule. This allows for a generalization including both those languages which do and those which do not make use of a copula. In what follows I intend the term "non-verbal predication types" to include copula constructions.

Three different groups of non-verbal predicates can be distinguished. The first consists of bare non-verbal predicates: adjectives and nouns. I have given an example of a predicatively used adjectival predicate in (7). In some languages it is also possible to apply nominal predicates predicatively in their bare form. Consider the Basque examples (8)–(9).

Basque (Isolate, Lafitte 1944)

(8)   *Soldado zen*
       soldier COP.PAST.IMPF.3sg
       'He was (a) soldier.'
(9)   *gizon-a biz*
       man-sg COP.PRES.2sg
       'You are a man.'

In (8) the nominal predicate *soldado* 'soldier' is used predicatively in its bare form. This is shown by the absence of the article *-a*, which basically signals singularity. The presence of this article in (9) signals that in this sentence the predicate is a noun phrase (a term in Functional Grammar) used predicatively. The two sentences can be represented as in (10)–(11).

(10) $soldado_N (x_i: he (x_i)_{\emptyset})_{\emptyset}$
       'He is (a) soldier.'
(11) $\{(ix_j: gizon_N (x_j)_{\emptyset})\} (dx_k: you (x_k)_{\emptyset})_{\emptyset}$
       'You are a man.'

Example (10) is a representation of the predicative use of the bare nominal predicate *soldado* 'soldier'. The representation in (11) shows the predicative use of a term. Whereas bare predicates are used in the construction of property

assigning expressions, term predicates are used in the construction of classifying or equative constructions. The predicate in (11) is itself represented as an indefinite (i) term (x_j), the predicative function of which is indicated by means of the curly brackets. In this case, too, there is no copula in the underlying representation.

The third group of non-verbal predicates contains adpositional and case-marked predicates, as illustrated by the capitalized constituents in the Quechua examples (12)—(13):

Imbabura Quechua (Andean, Cole 1982)

(12)   *chay wasi   ÑUKA-PAJ-mi*
        that house 1-POSS-FOC
        'That house (is) mine.' (lit. 'of me')

(13)   *Juzi-ka   UTAVALU-PI-mi*
        José-TOP   Otavalo-LOC-FOC
        'José (is) in Otavalo.'

In Functional Grammar adpositions and case markers are considered to be the expression of semantic functions carried by terms, in this case by predicatively used terms. This is accounted for by allowing semantic functions to be assigned to terms used within a term predicate, as in the representation of (13) given in (14):

(14) $\{(d1x_i: Utavalu_N (x_i))_{Loc}\} (d1x_j: Juzi_N (x_j))_{\emptyset}$

Here the definite (d) singular (1) term (x_1) specified as *Utavalu* carries the semantic function *Loc*(ative). This construction as a whole is applied as a predicate to a term x_j specified as *Juzi*. Again the uderlying representation does not contain a copula.

Existential constructions are considered to be a special subtype of locative constructions, in the sense that existence is viewed as being located at an unspecified location.

The different types of non-verbal predicate can be used in the construction of a number of non-verbal predication types, each expressing a different semantic relation, as listed in (15).

(15)   Non-verbal predication types (cf. Dik 1980)

Predication type based on:	Semantic relation expressed by predication type
Bare predicate	
$Pred_A (x_i)_{\emptyset}$	Property assignment
$Pred_N (x_i)_{\emptyset}$	Status assignment

Term predicate	
$\{(dx_i)\} (x_1)_{\emptyset}$	Identity
$\{(ix_i)\} (x_i)_{\emptyset}$	Class membership
Adpositional/Case-marked predicate	
$\{(x_i)_{Loc}\} (x_i)_{\emptyset}$	Location
$\{(\emptyset)_{Loc}\} (x_i)_{\emptyset}$	Existence
$\{(x_i)_{Poss}\} (x_i)_{\emptyset}$	Possession

The application of bare predicates to terms leads to constructions expressing Property Assignment in the case of adjectival (A) predicates, and Status Assignment in the case of nominal (N) predicates. The term status assignment is chosen since the nominal predicates that can be used predicatively in their bare form in some languages generally designate social categories such as professions, membership of political or religious groups, and kinship relations.

The application of term predicates to terms leads to constructions expressing Identity or Class Membership, depending on whether the term from which the predicate is derived is definite (d) or indefinite (i).

The application of adpositional or case-marked predicates to terms leads to constructions expressing a variety of semantic relations, depending on the semantic function assigned to the predicatively used term. The examples given here include Location (Loc), Existence, and Possession (Poss), since these seem to be the most central in most language systems, but other examples would be possible, such as, for instance, a predicate derived from a term with Agent function, as in (16).

(16)   *This book is by Shakespeare*

A further subdivision can be made, following traditional terminology, by contrasting term predicates on the one hand with bare predicates and adpositional or case-marked predicates on the other. The usual terminology when using such a subdivision is "equative" vs. "ascriptive". In what follows I will concentrate on ascriptive constructions. Equative constructions seem to be universal or nearly universal, and are therefore less interesting in the present context, although they will show up later in this paper as an often used substitute for ascriptive construction types lacking in particular languages.

3. Distinctive features of ascriptive non-verbal predication types

Given the central question of this paper, "to what extent do languages make use of non-verbal predication types?", it is important to have some criteria to decide whether a certain construction qualifies as an instance of the construction type looked for. Ascriptive non-verbal predication types are constructions based on an ascriptive non-verbal predicate, of which the main characteristics are listed in (17).

(17)   A predicate can be considered an ascriptive non-verbal predicate if that same predicate:
   i.   can be used in the construction of a term phrase, either as a head or as an attribute, without further measures being taken,[3] and
   ii. cannot be used as an independently referring unit without further measures being taken.

In other words, if a predicate can be applied directly within the term, and if that predicate is not itself a term, it is an ascriptive non-verbal predicate.

In order to illustrate the first restriction consider the Latin examples (18)— (19).

Latin (Italic, Bolkestein 1983)

(18) a.   *liber*   *puer-i*   *est*
          book.NOM   boy-GEN   COP.PRES.3sg
          'The book is the boy's.'

   b.   *liber*   *puer-i*
          book.NOM   boy-GEN
          'The boy's book.'

(19) a.   *liber*   *puer-o*   *est*
          book.NOM   boy-DAT   COP.PRES.3sg
          'The boy has a book/There is a book to the boy.'

   b.   **liber*   *puer-o*
          book.NOM   boy-DAT
          'The book to the boy.'

The examples in (18) show that, next to the predicative use of the genitive constituent, there is an attributive use of this constituent, whereas the examples in (19) show that the dative constituent can be used at the level of the predication, but not as an attribute within a term. The dative constituent

therefore does not comply with the first restriction on ascriptive non-verbal predicates.

In order to illustrate the second restriction consider the English examples (20)—(22) (for (20) cf. de Groot 1983).

(20)   *John's book*   *The book is John's*   *I prefer John's*
(21)   *my book*   **The book is my*   **I prefer my*
(22)   **mine book*   *The book is mine*   *I prefer mine*

The examples in (20) show that the genitive constituent *John's* can be used attrivutively and predicatively, but also as an independently referring unit provided that the possessed item is understood from the context. In its predicative use the context by definition makes clear what the possessed item is, and there is no reason to assume that in this case the genitive constituent is not an independently referring constituent. This assumption is corroborated by (21) and (22), which show that the attributive *my* cannot be used as an independently referring unit or be applied predicatively, and the independently referring *mine* can be used predicatively but not attributively. These facts lead to the conclusion that possessive predicates in English do not comply with the second restriction imposed on ascriptive non-verbal predicates, and that possession of a definite object is expressed in English through an equative construction rather than through an ascriptive construction.

4. Non-verbal predicability

With these two criteria in mind, it is possible to determine for any language to what extent it allows the predicative use of ascriptive non-verbal predicates. In other words, it is possible to determine whether an ascriptive non-verbal predication type is predicable in that language, where by (non-verbal) predicability[4] I understand the following:

(23)   *Predicability:* The possibility of grammatically acceptable application of a predicate β to an argument α.
          Non verbal predicability: The possibility of grammatically acceptable application of a non-verbal predicate β to an argument α.

I have checked 35 languages in order to determine their degree of non-verbal predicability. These languages were selected through a procedure to be fully described in Rijkhoff et al. (forthcoming). The main feature of the procedure is that it aims at maximal diversity within the sample, where diversity is

calculated on the basis of an objective measure. For reasons of presentation and space I give subsets of my data rather than full tables. In each case I have selected some languages for which my data are complete. A full description of the sample and an exhaustive account of the data will be given in Hengeveld (forthcoming).

The data collected can be arranged in such a way that the result is a two-dimensional[5] implicational hierarchy. In order to arrive at this result a distinction has to be made between constructions with definite and with indefinite arguments. Table 1 shows a selected subset of the data for the constructions with a definite argument. In this table a "+" indicates that a language makes use of the construction type, a "−" that it does not.

Table 1. The predicability of ascriptive non-verbal predication types with definite arguments — some examples

Language	LOC(dx)	A(dx)	N(dx)	POSS(dx)
Tamil	+	−	−	−
Abkhaz	+	+	−	−
English	+	+	+/−	−
Basque	+	+	+	−
Vietnamese	+	+	+	+/−
Spanish	+	+	+	+

Table 1 shows that if a language can use possessive predicates predicatively, it can also use nominal, adjectival and locative predicates predicatively; if it can use nominal predicates predicatively, it can also use adjectival and locative predicates predicatively, etc. This goes for all the languages in my sample for which my data are complete and is not contradicted by the languages for which my data are incomplete. For those languages which do not have a separate class of adjectives the adjective column was considered irrelevant.

The data in Table 1 reflect a hierarchy which can be represented as in (24). This hierarchy should be read in the following way: if a construction at a certain point in the hierarchy is predicable in a certain language, then all constructions preceding it in the hierarchy are also predicable in that language.

(24)   Predicate hierarchy — definite arguments

         LOC(dx) > A(dx) > N(dx) > POSS(dx)

Table 1 not only shows that languages can be arranged according to their degree of predicability in the domain of construction types with a definite argument, but also contains some illustrations of another feature of hierar-

chies: variations around the cut-off point. For a simple illustration of this kind of variation consider the English examples (25)−(26).

(25)   *John is chairman*
(26)   **John is carpenter*

In English a nominal predicate can be used predicatively only if the function it designates is unique, as in (25), but not if this function is non-unique, as in (26).

In the case of constructions with an indefinite argument, the results have to be evaluated in a different way. Of the four types of predicate under consideration only possessive and locative predicates are regularly used with indefinite arguments. This is not surprising, since, as Rijkhoff (1988) observes, in order to make an entity identifable for an addressee, either its existence has to be asserted, or it has to be related to another entity which is known to the addressee, such as its location or possessor. The arguments of possessive and locative constructions can therefore be both definite and indefinite, whereas the arguments of adjectival and nominal predicates are almost always definite, or at least specific. Probably it is because of this discrepancy that the studies of relations between non-verbal predication types referred to earlier have concentrated on possessive and locative constructions, and have not paid much attention to adjectival and nominal constructions.

Within the domain of constructions with an indefinite argument the predicate hierarchy can thus only be checked for possessive and locative constructions, where I intend the group of locative constructions to include the existential ones. Table 2 shows the results for a selected subset of the data.

Table 2. The predicability of ascriptive non-verbal predication types with indefinite arguments — some examples

Language	LOC(ix)	POSS(ix)
West Greenlandic	−	−
Ngiyambaa	+/−	−
Krongo	+	−
Koryak	+	+

What this table shows is that those few languages which have an indefinite possessive construction also have the indefinite locative construction. Again we can write this down as a hierarchy, as in (27).

(27)   Predicate hierarchy — indefinite arguments

$$LOC(ix) > POSS(ix)$$

The terminal points of the two versions of the predicate hierarchy contain the same predicates. The difference is that the second hierarchy does not contain the adjectival and nominal predicates in between the two terminal points.

The fact that two versions of the hierarchy have to be postulated on the basis of the (in)definiteness of the argument term suggests that definiteness should be treated as an independent parameter. The definiteness hierarchy is relevant in other domains too, and is given in (28) in its simplest form.[6]

(28)   Definiteness hierarchy

definite > indefinite

This hierarchy is relevant in both construction types that regularly occur with definite and indefinite arguments, locative constructions and possessive constructions. This is illustrated in tables 3 and 4.

Table 3. The predicability of possessive construction types with definite and indefinite arguments — some examples

| Language	POSS(dx)	POSS(ix)
!Xũ	—	—
Vietnamese	+/—	—
Ket	+	—
Tagálog	+	+/—
Burushaski	+	+

Table 4. The predicability of locative construction types with definite and indefinite arguments — some examples

Language	LOC(dx)	LOC(ix)
Ngalakan	+	—
Navaho	+	+/—
Nasioi	+	+

It appears from the data in Table 3 that those few languages which use indefinite possessive constructions also use definite possessive constructions. The data in Table 4 show that those languages which use indefinite locative constructions also use definite locative constructions.

Having separated the definiteness parameter from the predicate parameter, the two can be combined in the two-dimensional hierarchy given in (29).

(29)   Predicate and definiteness hierarchy
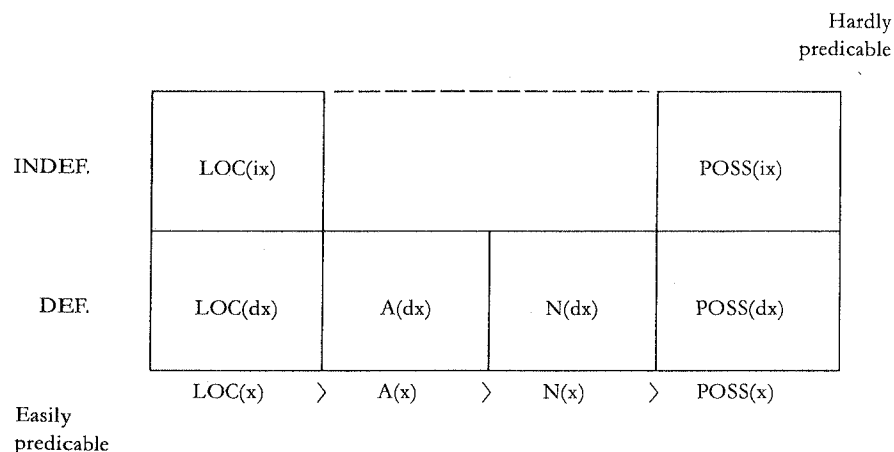
The predicate hierarchy is projected horizontally, the definiteness hierarchy vertically. In this way the terminal points of the two versions of the predicate hierarchy are connected, and the irrelevant combinations are simply not realized.

The bottom left box in (29) represents an easily predicable construction type, the upper right box a hardly predicable construction type. Thus this picture shows that in a typological perspective the definite locative construction and the indefinite possessive construction are diametrically opposed as to their degree of predicability.

So far I have approached the different hierarchies from the point of view of predicable non-verbal predication types. The same hierarchies appear to be relevant if one looks at the alternatives that particular languages use for non-predicable construction types. Let me first present the alternatives for non-predicable constructions with definite first arguments.

The alternatives used for non-verbal predication types in this domain are very homogeneous. In nearly all cases the alternative is an equative construction. Consider, for example, the following Tamil alternatives in (30)—(32).

Tamil (Dravidian, Asher 1982)

(30)   *Raaman   nalla-van*
Raman   good-NMLZR
'Raman is good.' ("Raman is a good one.")

(31)   *Avaru (oru) daktar*
    he   one   doctor
    'He is doctor.' ("He is one doctor.")

(32)   *Inta pustakam raaman-atu*
    this book   Raman.POSS-NMLZR
    'This book is Raman's.' ("This book is the one of Raman.")

In all three cases the predicate is a term phrase. Adjectival and possessive predicates are nominalized in order to allow them to occur in predicative position; nouns need not be nominalized, but some speakers prefer to provide them with the elsewhere entirely optional *oru* 'one', as if stressing the term-nature of the predicate.[7] In all these cases the predicative application of one of the three predicate types is avoided by reducing it to the status of head or attribute within a predicatively used term.

Table 5 gives some examples which show that the predicate hierarchy is relevant in the use of alternative construction types in the sense that if the equative construction is used as an alternative at one point in the hierarchy, it is also used at subsequent points in the hierarchy.

Table 5. The use of the equative construction as an alternative for non-predicable construction types with definite arguments

Language	LOC(dx)	A(dx)	N(dx)	POSS(dx)
Basque	+	+	+	EQ
Abkhaz	+	+	EQ	EQ
Chinese, Mandarin	+	EQ	EQ	EQ

+ = predicable construction type, EQ = equative construction

The alternatives used for non-verbal predication types with an indefinite argument are very heterogeneous. A well known alternative is the "have"-construction, not only used to express possessive meaning but also used to express existential and locative meaning. Another alternative is the predicative use of a quantifier, as in the Fijian examples (2)—(3) given earlier. Yet another frequently encountered alternative is the proprietive/privative construction, as in examples (33 a—b) from Ngalakan.

Ngalakan (Australian, Merlan 1983)

(33) a.   *gu-weʔ-ji-meniñ*
      CL-water-PRIV-COP
      'There was no water.' ("It was waterless.")

    b.   *ŋu-may-či*
       1sg-vegetable.food-PRIV
       'I have no food.' ("I am foodless.")

A final alternative for possessive constructions is the existential construction, in several variants, paraphrased in (34):

(34) a.   *There is my book.*   (example: Turkish)
     b.   *There is a book to me.*   (example: Latin)
     c.   *A book there.is.to.me.*   (example: Nasioi)
     d.   *Talking about me, there is a book.* (example: Mandarin)

In (34 a) the possessive predicate has the status of an attribute of the argument term. In (34 b—c) the possessor is expressed as an entity experiencing the existence of the possessed item, in (34 b) through the expression of this second argument in the dative case, in (34 c) through the expression of this second argument in a benefactive stem of the existential verb. In (34 d) the possessor is expressed as a theme, the constituent with respect to which the existence of the possessed item is relevant.

For each of these alternative constructions the observation holds that if it is used as an alternative at one point in the predicate hierarchy, it is also used at subsequent points in the hierarchy.

Table 6 a shows that those languages which use the proprietive/privative construction to express locative or existential meaning also use this construction to express possessive meaning. It furthermore shows that languages may use more than one alternative, as in the case of Ngalakan, but that even in that case the alternatives so to speak add up from left to right, the widest variety being shown in the case of possessive constructions. Table 6 b shows similar facts for some languages which use the lexical or "have"-construction as an alternative.

Table 6 a. The use of the proprietive construction as an alternative for non-predicable construction types with indefinite arguments

Language	LOC(ix)	POSS(ix)
Ket	+	PROPR
Ngiyambaa	+/PROPR	PROPR
Ngalakan	PROPR, QUANT	PROPR, QUANT, HAVE

+ = predicable construction type; PROPR = proprietive/privative construction; QUANT = predicative quantifier; HAVE = "have"-construction.

Table 6 b. The use of a "have"-construction as an alternative for non-predicable construction types with indefinite arguments

Language	LOC(ix)	POSS(ix)
Babungo	+	HAVE, EXIST
Guaraní	+	HAVE
Spanish	HAVE	HAVE

+ = predicable construction type, HAVE = "have"-construction, EXIST = existential construction.

What Tables 5, 6 a and 6 b show is that an alternative used at a certain point in the predicate hierarchy is also used as an alternative for the constructions to its right.

Summarizing the observations, one can say that:

(35)   The predicate hierarchy gives a systematic account of
   i.   the extent to which languages make use of non-verbal predication types;
   ii. the extent to which languages make use of regular alternatives for non-predicable non-verbal predication types.
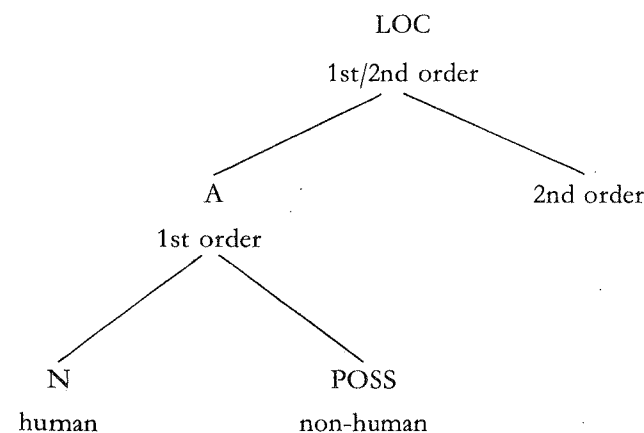
It seems, then, that the predicate hierarchy, with its two realizations in the definite and indefinite domain, is highly relevant in systems of non-verbal predication. Even more so, since so far I have found no clear counter-examples.[8]

5. Explanations

Although the relevance of the predicate hierarchy seems to be firmly established, so far I have not gone into the factors motivating its existence. Although I certainly have no final answers to this problem, I do have some suggestions.

The first concerns the range of arguments that the predicates under consideration can be applied to. Consider the adapted and simplified version of Sommers' predicability tree in (36).

(36)   The predicate hierarchy and the predicability tree (Cf. Sommers 1967; Keil 1979; Bickerton 1981)

```
                        LOC
                   1st/2nd order
                  /             \
                 A             2nd order
             1st order
            /        \
          N           POSS
        human        non-human
```

The position of a predicate in this tree shows to what kinds of arguments it can be applied. For the interpretation of this tree, the distinction between first and second order entities (cf. Lyons 1977: 442—443) is relevant. First order entities are those that can be located in space, such as persons, animals, cars and houses. Second order entities are those that can be located in space and time, such as meetings, weddings, and destructions.

In terms of this distinction, locative predicates have the widest range of applicability. The same locative predicate can be applied to both first and second order arguments. Many adjectival predicates can be applied to all kinds of first order arguments. Nominal predicates and possessive predicates, on the other hand, have a much more limited range of applicability. Nominal predicates can be applied to human first order arguments only, and possessive predicates are generally applied to non-human first order arguments only.

A second factor motivating the existence of the predicate hierarchy can be discovered if one looks at the properties expressed by non-verbal predicates. These properties exhibit different shades of abstractness, as indicated in (37).

(37)   The predicate hierarchy and degrees of abstractness

LOC(x)	> A(x)	> N(x)	> POSS(x)
Spatial properties	> Physical properties	> Social properties	> Conventional properties
Concrete	>	>	> Abstract
Perceptible	>	>	> Imperceptible

Roughly speaking, locative predicates designate spatial properties, adjectival predicates physical properties, nominal predicates social properties, and pos-

sessive predicates properties that are dependent on legal or social conventions. In this sense the predicate hierarchy reflects different shades of abstractness, and as such is an instantiation of a more fundamental parameter. The degree of abstractness is also reflected in the number of different conceptualizations that one finds as alternatives for the non-verbal predication types. Note that this same parameter can, to some extent, also be defined in terms of the perceptibility of the properties rather than in terms of their degree of abstractness.

Thus two motivating factors present themselves: one from the point of view of the range of arguments that the ascriptive non-verbal predicate can be applied to, the other from the point of view of the property designated by the ascriptive non-verbal predicate. Each of these explanations points at an even more basic hierarchy at a higher level of abstraction. It may be that it is the interaction between the two of them that has such important consequences.

Notes

1. I am indebted to Simon Dik and Hotze Mulder for their valuable comments. Abbreviations used throughout are "A" ("adjective"); "ART" ("article"); "CL" ("classifier"); "COP" ("copula"); "DAT" ("dative"); "DEM" ("demonstrative"); "FOC" ("focus"); "GEN" ("genitive"); "LOC" ("locative"); "IMPF" ("imperfective"); "N" ("noun"); "NMLZR" ("nominalizer"); "NOM" ("nominative"); "POSS" ("possessive"); "PRED" ("predicate"); "PRES" ("present"); "PRIV" ("privative"); "sg" ("singular"); and "TOP" ("topic").
2. See also Hengeveld (1986, 1987, 1990, forthcoming).
3. This restriction, among other things, excludes adjectival verbs from being classified as non-verbal predicates, since these have to be relativized when used in the construction of terms. See, e. g., Lehmann (1988, ch. 2), Wetzer (1991).
4. Predicability can also be understood in an ontological sense. See Sommers (1967) and the discussion in Hengeveld (1990).
5. There is a third dimension that is relevant for determining the degree of non-verbal predicability of a language. Constructions with a first order argument are more easily predicable than those with a second order argument, and these in turn are more easily predicable than those with a third order argument (see Hengeveld 1990).
6. See Comrie (1981: 128) on refinements of this hierarchy.
7. Asher (1982: 108) notes, with respect to the expression of nominal complements:
   In these there is no distinction between defining, identity and role types, in the sense that the complement will in each case be a nominal form in the nominative case. For some, though by no means all, speakers there is, however, a difference between the defining and the role type, in that a noun in the latter can optionally be preceded by *oru* 'one' used as a marker of indefiniteness, while a noun in the former cannot.
8. The hierarchy might also be relevant from a psycholinguistic and from a diachronic perspective (see Hengeveld forthcoming).

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Impersonal constructions as a strategy for second-order predication

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1. Introduction

This paper is concerned with a special class of sentences commonly and conveniently labelled "impersonal"; more precisely, this term will refer here to a subset thereof with Polish *się*, Italian *si*, and English *one*,[1] whose properties will be specified in section 2. Some apparently precise but inadequate solutions in terms of Transformational Generative Grammar will be pushed to unacceptable conclusions. A competing approach will be suggested in terms of a categorial grammar with predicate abstraction; it will be argued that impersonal sentences are a special class, for in spite of their apparent first-order syntactic structure, their semantics will be shown to be best analyzed in terms of second-order predication. This will be argued to follow from the nonreferentiality of the impersonal subject, and an independently observable constraint whereby impersonal sentences, to be interpretable as propositions, must contain a complement or modifier, even if the latter is not required by verbal subcategorization in other types of structure.

2. The corpus

I will be concerned here only with those sentences in Polish, English, and Italian that meet the following structural and distributional criteria:
(i) the occurrence of free morphemes (lexical items) *się*, *si*, and *one* in Polish, Italian, and English sentences, respectively;
(ii) the substitutability of nominative NPs for these lexical items without inducing ungrammaticality, pace some adjustments in concord and word order required in particular languages;[2]
(iii) the exclusion of cooccurrence of *się/si/one* with (other) nominative NPs, including coordination with the former;
(iv) the lack of influence of lexical transitivity of the finite verb on the occurrence of *się/si/one*.