ANOTHER LOOK ON SECOND AND THIRD ARGUMENTS[1]

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1. Introduction

Faber and Mairal (this volume) propose a number of modifications of Functional Grammar (henceforth FG) in order to design a syntax-semantics interface based on lexical constructions that operate within lexical classes. According to these authors, the changes that the theory of FG (Dik 1997a, b) demands include: in the first place, the replacement of natural semantic predicates -along with the principles of stepwise lexical decomposition- with abstract semantic predicates that constitute a metalanguage suitable for capturing not only the features of meaning definitions but also the significant syntactic properties from logical representations; secondly, the substitution of a set of lexical constructions or *templates*, which allow for syntactic generalization across predicate types, for predicate frames; and, thirdly, the development of a set of lexical rules that operate both paradigmatically and syntagmatically: in the paradigmatic axis, lexical rules determine the semantic-syntactic configuration or lexical classes, whereas, in the syntagmatic axis, they restrict the range of potential instantiations of a given lexical class. Although Faber and Mairal (this volume) do not engage in developing lexical rules, they contribute to dynamizing the lexical Fund and to enriching the expression component of

FG, an area in which a good deal of research is still needed.

The aim of this paper is to explore some implications of Faber and Mairal´s (this volume) proposal for the typology of arguments as devised in Dik (1997a: 276-279). My point is that, if the model of lexical representation advanced by Faber and Mairal is generally adopted, light is shed on argument structure because the argument status of certain participants of intransitive and transitive constructions is acknowledged more clearly than in the present framework. Dik (1997a: 118) remarks that semantic functions usually assigned to satellites may, under certain conditions, have the status of argument functions, but he does not go into the details of what these conditions are, apart from providing a list of combinations of semantic functions for two and three-place verbal predicates. If the line of my reasoning is correct, the argument status of certain participants remains rather blurred because predicate frames are not sufficiently flexible to accomodate participants bearing borderline semantic functions and also because the perspectival definition of syntactic functions the coding and the behaviour and control properties of term phrases in the function of arguments. In general, I hold that Result and the telic version of Source, Path, Direction and Location constitute nuclear semantic functions with argument status.

So as to build my case step by step, I have organized this paper as follows. Section 2 bears on the theory of argument structure currently in use in FG, which is revised critically along the lines mentioned above in section 3. Section 4 puts forward a modified version of the argument structure algorithm proposed by Dik (1997a). Such modified version is motivated semantically in section 5 by defining

prototypical and less prototypical intransitive
constructions on the grounds of the assignment of the
semantic functions Source, Path, Direction and Location. A
characterization of the prototypical transitive construction
is also offered in section 5. Section 6 puts forward, by way
of conclusion, *The Principle of Lexical Template
Instantiation*, which complements Van Valin and LaPolla's
(1997) and Rappaport and Levin´s (1998) well-formedness
conditions on semantic and syntactic realization, as well as
Faber and Mairal´s (this volume) lexical template
representation.

2. First, Second and Third Argument

Dik (1997a: 120) devises an algorithm to account for the
distribution of semantic functions over the argument
positions of basic predicate frames. As can be seen in (1),
this algorithm restricts the possible combinations of
semantic functions, limits the range of functions of the
First, the Second and the Third Argument, (A1, A2 and A3,
respectively) and defines some incompatibilities; [Exp]
indicates that the argument participates in an Experiencer
predication:

(1)

A1	A2a	A2b
Agent	Goal[Exp]	Recipient[Exp]
Positioner		Location
Force		Direction
Processed[Exp]		Source
Zero[Exp]		Reference

The algorithm in (1) stipulates that, firstly, predicate
frames never contain more than one instance of a semantic

function; secondly, A1 has always the functions listed in the A1 column; thirdly, in two-place predicate frames A2 has one of the functions listed in the A2a or A2b column; and, fourthly, in three-place predicate frames, A2 has the only function listed in the A2a column and A3 has the one of the functions listed in the A2b column.

3. A1, A2 and A3 revisited

The typology of arguments adopted by FG is based on the accessibility of term types to the assignment of the syntactic functions Subject and Object, in such a way that A1 is more accessible than A2 and A2 is more accessible than A3 to this syntactic function. Additionally, in languages in which the syntactic function Subject is relevant, "first arguments in active constructions typically share the characteristic 'Subj properties' with respect to coding and behaviour" (Dik 1997a: 275). The fact that semantic functions in the algorithm in (1) are grouped -at least partially- in terms of grammatical coding and behaviour raises the interesting question of whether or not A1, A2 and A3 are generalized semantic functions in FG. In my view, for generalized semantic functions to exist it is necessary not only that there is a mnemotecnic label that subsumes a list of semantic functions, but also that this label identifies a central explanatory construct of the theory. This entails the possibility of associating semantic information with morphosyntactic coding. Let us deal with these aspects in turn.

A facet of the answer to the question whether A1, A2 and A3 constitute generalized semantic functions is straightforward: Dik makes no claim concerning the coding and the behaviour and control properties of second and third arguments, apart from underlining the marked character of

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the constructions in which A2 or A3 bear Subject. In my opinion, markedness is understood as statistical here: A1 is more frequent as Subject than A2 and A2, in turn, more usually attached to Subject than A3. A case in point is:

(2)

a.   Someone has slept in this bed.

b.   This bed has been slept in.

Dik is not clear on the analysis of examples like (2), where the active non-prepositional Subject in (2.a) alternates with the passive prepositional Subject in (2.b). On the one hand, the Semantic Function Hierarchy excludes the assignment of Subject to Location in English (Dik 1997a: 267). On the other, in the discussion that follows, Dik (1997a: 273) admits the assignment of Subject to Location instances like *John was writing on the terrace / The terrace was written on by John*, in such a way that the assignment of Subject to Location represents a criterion for argumenthood: arguments can receive Subject, satellites cannot. In Dik´s (1997a: 273) words, "it appears that Subject assignment is possible only when the term in question is close to being an argument of the nuclear predicate." Let us also consider the following example of dative shift, which implies the alternation of a prepositional Recipient in (3.a) with the active non-prepositional Recipient in (3.b) and the passive non-prepositional Recipient in (3.c):

(3)

a.   The porter gave the keys to the new tenant.

b.   The porter gave the new tenant the keys.

c.   The new tenant was given the keys.

As I see it, the crux of the matter is that the semantic functions in the columns [A2a] and [A2b] in the algorithm in (1) do not show consistent grammatical coding: the [A2b] column comprises prepositional and non-prepositional subjects and objects. Neither do they display consistent grammatical behaviour: the prepositional Locative in the [A2b] column is passive, whereas the prepositional Recipient in the same column is active and the non-prepositional Recipient distributes both in the active and the passive voice. In cross-linguistic terms, lack of formal restrictions in this area contributes to the typological validity of the theory. Intralinguistically, however, the fact that only the semantic functions in the [A1] column in the algorithm in (1) show consistent grammatical coding and behaviour seems to indicate that a distinction is needed not only in terms of statistical markedness but also based on considerations of structural markedness.[2] As stated by Croft (1990) and Givón (1995), markedness falls into several categories, of which structural markedness is of interest for this discussion:[3] Givón (1995) identifies topicality (and, by extension, subjecthood) with structurally unmarked patterns, which I associate with the presence of active morphosyntax and the absence of inflectional morphology and/or prepositional government. What logically follows is that A2 and A3 as Subject are structurally marked by voice, case or prepositional government: indeed, this analysis holds good for prepositional subjects like the one in (2.b) and Subject recipients like the one in (3.c).

Recapitulating, A1, A2 and A3 do not constitute generalized semantic functions in the sense of having

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[2] Embedded prepositional subjects like *for you* in *These books are for you to read* reinforce the argument, but I do not discuss them here.

consistent grammatical coding and behaviour. Given that the grammatical impact of syntactic function assignment plays no role in the perspectival approach to Subject and Object espoused by FG, it comes as no surprise that argument structure is dissociated from morphosyntactic coding. In other words, argument structure is not formally constrained -which I have put down to the concern of the theory with typological validity- but semantically constrained. Argument structure in FG is valency-based: the number of arguments equals the quantitative and qualitative valency of the verbal predicate. This is illustrated by examples like the following:

(4)
a. Maria was drinking.
b. Maria was drinking beer.
c. Maria was drinking a pint of beer.

Given the verbal predicate 'drink' in example (4), the FG analysis of argument structure is as follows: the verbal predicate displays quantitative valency two which is reduced to one in the case of the linguistic expression (4.a), where A2 is underspecified as a result of the application of a rule of A2 reduction (Dik 1997b: 14). If we consider the qualitative valency, the semantic function Agent of (4.a), (4.b) and (4.c) is borne by A1, and the Goal of (4.b) and (4.c) by A2.

A comparison with Role and Reference Grammar (Van Valin and LaPolla 1997), hereafter RRG, may be illuminating at this point. RRG is a functional-structural theory of language in which argument structure contains the formal and

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3 Croft (1990) distinguishes structural, textual and distributional markedness, to which Givón (1995) adds substantive markedness. I refer

syntactic features relevant for the later stages of the derivation. Argument structure in RRG is macrorole-based, and, thus, formally and syntagmatically constrained. The semantic-syntactic notion of macrorole originates in a generalization across semantic roles. In Van Valin and LaPolla´s (1997: 139) words, "macroroles are generalizations across the argument-types found with particular verbs which have significant grammatical consequences; it is they, rather than specific arguments in logical structure, that grammatical rules refer to primarily". The main question is what is coded by the grammar in the same or in a different way: the generalized agent-type role receives the same grammatical treatment, which is, in turn, different from the grammatical treatment of the generalized patient-type role. Going back to example (4), whereas neither formal nor syntagmatic considerations impose restrictions on argument structure in FG, macrorole assignment in RRG is determined by the syntactic realization of sentences. The logical structure of (4.a), (4.b) and (4.c) is linked to the syntax by means of the assignment of the ACTOR macrorole to the thematic relation Effector in (4.a), and through the assignment of the ACTOR to the thematic relation Consumer in (4.b) and (4.c). Macrorole assignment is transparent in (4.a) and (4.c): one argument gets one macrorole in (4.a) and quantitative valency two is associated with the assignment of both ACTOR and UNDERGOER in (4.c), the UNDERGOER being licensed by the thematic relation Consumed. On the other hand, macrorole assignment is opaque in (4.b), displaying one macrorole because only fully referential noun phrases are privy to macrorole status. This sort of syntactic restriction justifies the distinction drawn in RRG between valency and transitivity: valency is a function of

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the reader to these authors for the details.

the semantics of the verb whereas transitivity is determined by the syntax of the construction into which the verb appears. This aspect confers a privileged status to macroroles, which guarantee the linking between semantics and syntax thus enjoying full explanatory status: whereas grammatical rules tend to make reference to the functions performed by the arguments of the verb rather than to the argument itself in FG, grammatical rules -including those responsible for coding and behaviour and control properties- make reference to the syntactically-restricted macroroles. Even though Dik (1997a: 119) remarks that when a rule of grammar is best formulated in terms of AX (A1, A2 or A3) no mention is made to the semantic function of AX, argument structure is not a basic explanatory construct of the theory because the notion of argument is exclusively semantic.

Summarizing, A1, A2 and A3 do not reflect the morphosyntactic impact of argument structure and, consequently, do not link the semantics to the syntax of the clause, which rules them out as basic explanatory constructs of the theory of FG (it is probably the case that FG favours semantic, syntactic and pragmatic function assignment for this purpose).[4]

4. Result, Telic Locative and Atelic Locative

Faber and Mairal (this volume) devise a lexical template for CUT verbs from which it is possible to derive all the meaning definitions and syntactic configurations of the verbs of this semantic class and which comprises all semantic features relevant for the linking with the syntax of specific verbs:

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[4] See Mairal and Van Valin (forthcoming) on arguments vs. macroroles: these authors point out that, whereas both static and dynamic states of affairs take First Argument in FG, dynamic *Aktionsart* types

(5)

[[**do´**(w, [**use.sharp-edged.tool(α)in(β)manner´** (w, x) & [BECOME **be-at´** (y, x)]] CAUSE [[**do´** (x, [**make.cut.on´** (x, y)])] CAUSE [BECOME **pred´** (y, (z))]],   =x.

This lexical template is to be interpreted in the following way: the activity of cutting induces a change of state whereby an affected entity becomes cut in a particular way. Considering the semantic roles involved, the interpretation of the lexical template in (5) goes as follows: an effector *w* carries out the cutting activity upon a patient *y* by using a sharp-edged instrument *x* in such a way that the patient becomes cut in a particular way, into pieces, in tears, open, etc., which is captured in the representation above by means of the variable *z*.

Some comments on the lexical template in (5) are in order. To begin with, Faber and Mairal yield way to lexical template variables that do not reach morpho-syntactic coding. In order to comply with well-formedness conditions of syntactic realization such as Van Valin and LaPolla´s (1997: 325) *Completeness Constraint* or Rappaport and Rappaport and Levin´s (1998: 113) *Argument Realization Condition*, both of which stipulate that all the variables of logical representations receive morpho-syntactic interpretation, Faber and Mairal divide the lexical template variables in (5) into two types: internal and external. Internal variables are those semantic features which characterize an entire lexical class, thus qualifying as paradigmatic, whereas external variables are those aspects of the meaning of a verb that are realized syntactically,

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distribute with the ACTOR macrorole and static *Aktionsart* types with the UNDERGOER macrorole as first argument in RRG.

thus qualifying as syntagmatic. In other words, only syntagmatic information is projected onto the expression component while paradigmatic information remains a classification principle of the lexical Fund.

As is well known, there is a large body of research on events that stays committed to the view that complex events have internal structure: they consist of an inner and an outer event, in such a way that the outer event expresses causation and the inner event expresses change of state. Faber and Mairal (this volume) push to the limit this idea and distinguish a meta-event of lexical nature, which is captured in terms of the internal variables of the lexical template.[5]

Let us consider the following example:

(6)   The carpenter cut the wood into pieces.

In the linguistic expression (6) the state of affairs to which *cut* makes reference induces the state of affairs to which *consisting of pieces* makes reference. The variable z in the lexical template in (5) accounts for the stative state of affairs (*the wood consisting of pieces*) that results from the dynamic state of affairs (*the capenter cutting the wood*). Faber and Mairal add the variable z to satisfy the condition that Rappaport and Levin (1998: 112) call *The Subevent Identification Condition*, which states that each subevent in the event structure must be identified with a lexical head in the syntax. It is interesting that the resulting state achieves argument-like status. Although Faber and Mairal bypass this question by referring to Manner, Instrument, Affected Object and Result as *semantic parameters*, the Result participant satifies both well-

formedness conditions, the syntactic Argument Realization Condition and the semantic Subevent Identification Condition. For this reason, Result constitutes an argument whereas Manner and Instrument, which satisfy The Argument Realization Condition only, do not, thus qualifying as satellites. Notice that the criterion of subjecthood for argument status has been abandoned: the Result participant is not a candidate for subject.

With this background we are now in a position to offer a modified version of the argument structure algorith given in (1) (excluding the [Exp] feature), which follows in (7):

(7)

A1	A2a	A2b	A2c
Agent	Goal	Recipient	ATLocative
Positioner		Result	
Force		TLocative	
Processed			
Zero			

Two words of caution are in order here: firstly, no claim of typological validity is made with respect to the modified algorithm in (7); this paper centres in English exclusively. Secondly, I do not consider the function Reference because I admit that more research is needed on this topic. [6]

The modified algorith in (7) is to be understood as follows: the semantic functions in the A2b column are arguments whereas the ones in the A2c column represent

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[5] See Tenny and Pustejovsky (2000) for more detailed information.

[6] I do not consider here, either, instrumental subject constructions because they are derived from prototypical transitive constructions by means of a rule of argument reduction, in such a way that Instrument is semantically and syntactically promoted to Subject, the prototypically human Agent being left out of the predication: *I opened the door with the key / The key opened the door*. Attention should be paid to these constructions in future research.

pseudo-arguments. Other semantic functions like Manner constitute satellites. Recipient is argumental for the same reasons as Result: there is a complex event which can be paraphrased as *someone causes somebody else to become the possessor of something* and the Recipient participant satisfies The Argument Realization Condition and The Subevent Identification Condition. As regards the Locative macrofunction, which subsumes Location, Source, Path and Direction, the defining criterion is that the A2b column implies telicity whereas the A2c column does not entail telicity. In this sense, the semantic macrofunction T[elic]Locative takes part in complex events like *someone putting something somewhere*, paraphrasable as *someone causes something to be somewhere*. Therefore, the two well-formedness conditions I have just made reference to are also satisfied. The macrofunction AT[elic]Locative qualifies as a pseudo-argument. Even though it is a nuclear semantic function, it is not associated with complex events, and, consequently, The Subevent Identification Condition is not satisfied (or is not relevant).

The semantic functions subsumed by ATLocative are illustrated in (8):

(8)
a.   Customers read magazines in this bookshop (ATLocation)
b.   Mum comes straight from her office in the evening (ATSource).
c.   Molly crosses through the new station every morning (ATPath).
d.   Pete walks towards the park after lunch (ATDirection).

As the examples show, the feature [± telic] results from the combination of the verbal predicate with its Tense-Aspect-Modality characterization plus the prepositional phrases in the function of pseudo-argument. That is, the approach taken here shows clearly that the scope of *Aktionsart* is the whole nuclear predication, not simply the verbal predicate. This is consistent with the stance that FG has adopted in this respect, which considers the *Aktionsart* of the predication "a compositional function of the semantic properties of both predicate and terms" (Dik 1997a: 106).

The semantic functions subsumed by TLocative are illustrated in (9):

(9)
a.　John put the books on the shelf (TLocation).
b.　Kim produced a key from his pocket (TSource).
c.　Someone has pushed a screwdriver through the door (TPath).
d.　My parents are gone to India (TDirection).

With respect to Subject assignment, both ATLocation and TLocation are candidates to this syntactic function. Example (2), which I repeat as the pair (10.a)-(10-b) for convenience, illustrates ATLocation; the pair (10.c)-(10.d) shows passivization, thus Subject assignment, distributing with TLocation:

(10)
a.　Someone has slept in this bed.
b.　This bed has been slept in.
c.　Someone has broken into the house.
d.　The house has been broken into.

Locative, therefore, marks the cut-off point with respect to Subject Assignment; this syntactic function cannot be assigned to Result. A first evaluation of the modified algorithm of argument structure I have given in (7) also evidences that this algorithm shows functional consistency since it contains arguments, as opposed to satellites. Functionally, Locative is a borderline function too in the sense there is no argumenthood as one goes down the hierarchy. Formally speaking, the cut-off point is Goal, given that Recipient, Result and Locative prototypically trigger prepositional government.

It might be the case that, even with these modifications, A1, A2 and A3 do not constitute central explanatory constructs of the theory yet. Although a totally satisfactory solution in this area might still elude us, I hope to have taken a solid step in this direction. A remaining task that should be undertaken, however, is that of finding an overall semantic motivation of the distinctions I have drawn in this section. Section 5 motivates the argument status of Result and TLocative (and the pseudo-argument status of ATLocative) on the more general grounds of event structure and *Aktionsart*.

5. Prototypical verbal constructions

Descriptive grammars tend to regard adverbial participants as semantically and syntactically optional and, consequently, sentences remain logically complete and grammatically correct if adverbials of both transitive and intransitive constructions are left out. A closer view on these participants, however, has revealed that they play an essential role in the predication, being neither semantically nor syntactically optional. Levin (1993), for instance, demonstrates that some verbal alternations, such

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as the one illustrated by pairs like *They sell these books easily/ These books sell easily*, are defined precisely on the basis of the presence of the adverbial participant. More importantly, semantic approaches to the nature of events, like Talmy´s (1988) or Langacker´s (1991), claim that the canonical structure of events consists basically of some sort of force dynamism, in such a way that a participant makes contact with another participant, which produces a transfer of energy that causes some change on the second participant. This view provides a semantic motivation for my argument in the sense that the expression of participants directly involved in the event chain is compulsory, including the expression of central semantic features like the resulting state of the activity (Result), the physical target of the activity (TLocative) and the physical setting of the activity (ATLocative); otherwise the event is semantically incomplete.

According to the *Aktionsart* typology adopted by Faber and Mairal (this volume), following Van Valin and LaPolla (1997), who draw, in turn, on Vendler (1967) and Dowty (1979), the accomplishment version of activity verbs qualify as active accomplishments. My point is that active accomplishments represent the semantic and syntactic prototype of transitive and intransitive constructions. More specifically, active accomplishments with verbs of creation, consumption and induced motion constitute the prototype of the transitive construction, whereas active accomplishments with verbs of motion constitute the prototype of the intransitive construction. The criterion of prototypicality is, in consequence, telicity as reflected by semantic-syntactic maximization.[7]

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[7] Although I draw on Taylor´s (1989: 211) notion of the prototypical transitive construction, I also offer a syntactic definition of this

As regards prototypical transitive constructions, let us consider the following examples:

(11)

a.   The barman was eating.

b.   The barman was eating pasta.

c.   The barman ate the pasta.

Example (11.a) has undergone A2 reduction and, therefore, is non-prototypical. Example (11.b) is less prototypical than (11.a) because (11.a) is telic and (11.b) is not telic. As I have just remarked other instances of the prototypical transitive construction are the ones that include verbs of creation, as (12.a) or verbs of induced motion, as (12.b):[8]

(12)

a.   This sonnet was written by Shakespeare.

b.   The passengers put their luggage on the rack.

As for prototypical intransitive constructions, let us consider the following examples:

(13)

a.   Mary ran.

b.   Mary ran in the park.

c.   Mary ran to the park.

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notion, as well as a proposal for the syntactic prototype of intransitive construction.

[8] Kiparsky (1998: 266) remarks that the function of the partitive that alternates with the accusative as the object of some verbs in Finnish is "to license unboundedness at the VP level". Unlike Kiparsky (1998: 268), who takes the line that "what is relevant is the gradability of the event: bounded predicates, whether telic or atelic admit of no degree", I consider telicity the decisive criterion.

As in the transitive construction, the defective complementation that results from A2 reduction is non-prototypical. This is the case with (13.a). The atelic expression (13.b) is less prototypical than the telic expression (13.c). Notice that telicity is understood in three different, albeit complementary, ways: as noun phrase definiteness, as in (11.c) with respect to (11.b); as fuller semantic and syntactic complementation, as in (11.b) as compared with (11.a) and as in (13.b) with respect to (13.a); and as goal-oriented prepositional government, as in (13.c) with respect to (13.b). Considering the distinction I have established in the previous section between arguments and pseudo-arguments, arguments satisfy semantic and syntactic well-formedness conditions and correlate with prototypical constructions as defined in this section; pseudo-arguments, which satisfy one well-formedness condition only, typically distribute with less prototypical constructions; satellites, which satisfy neither condition, do not play any role in the distinction between prototypical transitive and intransitive constructions as I have characterized them here. It logically follows that causative state verbs taking the semantic function Result are also semantically and syntactically prototypical. The final section of this paper insists on this aspect.

6. Conclusion

This definition of prototypical verbal constructions contributes to Faber and Mairal´s (this volume) proposal of lexical rules which relate lexical entries to their complement configurations in the sense that it provides a semantic motivation for the relationship between canonical lexical templates and their configurations. To round off this paper, it is my contention that a functional principle

should guarantee the suitable degree of implementation (that is, of specification of external variables of a given instantiation) of a lexical template. The Principle of Lexical Template Instantiation stipulates that, prototypically, all the external variables of the instantiations of lexical templates are fully specified:

The Principle of Lexical Template Instantiation
Lexical templates tend to map maximal implementations onto syntactic structures, in such a way that isomorphism between semantic participants and syntactic constituents is maximized.

This functional principle complements Van Valin and LaPolla's (1997: 325) and Rapapport and Levin´s (1998: 112-113) well-formedness conditions on syntactic realization. If the reasoning is correct, lexical templates and their syntactic configurations present an interesting contrast: lexical template modelling processes involve variable and/or operator reduction from lexical templates (Faber and Mairal, this volume); whereas they favour maximal implementations in both transitive and intransitive contructions, thus diminishing the scope of variable reduction.

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