Mapping constructions as word templates: evidence from French

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In this paper, I will outline a monotonic approach to what Jackendoff (1990) calls the correspondence problem, i.e. the mapping of semantic structure to surface syntax. My approach is based on three simple ideas. The first is that mapping principles are word templates, i.e. abstractions over fully specified lexical entries (or certain subparts of lexical entries): they constitute generalizations over the way classes of words associate their semantic arguments to their syntactic complements. The second is that mapping principles can include complex information, and, crucially, that the kind of complex information found in mapping principles spans the range of information found in lexical entries. The third idea is that the set of mapping principles (or word classes in the present approach) found in a grammar do not constitute an amorphous list of principles. They form a hierarchy of more or less general mapping types and this hierarchy of mapping types allows us to capture generalizations while accounting for the full range of phenomena.

It is beyond the purview of this paper to completely justify the hypothesis that mapping principles are word templates. Part of the motivation stems from general considerations in favor of declarative, monotonic approaches to grammatical knowledge which I cannot review here (see Bresnan and Kaplan (1982), Sag (1991) for some arguments from both a learning and processing point of view). I concentrate here instead on presenting a few French mapping principles which support the three ideas I mentioned above. The paper is organized as follows. First, I present a French linking construction that is language-specific and informationally rich and show that the range of information this mapping principle makes use of is similar to the range of information we find in fully specified lexical entries. Second, I present a brief overview of an actual linking theory which embodies the three leading ideas mentioned at the outset. I particularly stress how this theory can model idiosyncratic, informationally rich mapping principles as well as the most general ones. Third, I study some of the consequences of the third leading idea, namely the hypothesis that mapping principles are organized in a hierarchy of word types. I show that assuming the set of mapping principles a grammar contains is so organized, we are able to model some well-known dependencies between

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1. A language-specific linking pattern

The idiosyncratic pattern which I use to illustrate the claim that mapping principles can be informationally rich is exemplified in (1a), which is truth-conditionally equivalent to (1b). The pattern, which I call the Dative Predication pattern or DP, was first discussed at length in Ruwel (1982). It is specific to French; it does not exist in closely related Romance languages like Italian. There are four facts concerning the DP construction which are relevant here.²

First, the pattern applies productively to a set of about sixty verbs which are semantically defined, basically verbs of saying and of mental representation. Some of the verb classes are mentioned below. What is interesting here is that all verbs which alternate between a Dative Predication and a sentential complement structure like croire in (1a) vs. (1b) can also occur in so-called non-verbal subject-to-object-raising structures illustrated in (2). Even more striking is the fact that of the small class of French verbs which can occur in verbal raising-to-object structures, but not in non-verbal raising-to-object structures, none can enter in a Dative Predication structure (see (3)). Given the well-known idiosyncrasies of verb class selection by lexical rules or linking constructions (see Green (1974), Pinker (1989), Goldberg (1992)), I take these two facts as strong evidence that the Dative Predication pattern is an instance of non-verbal raising-to-object (or its equivalent in other frameworks).

(1) a. Je crois bien cette circonstance atténuante à certains crimes...
I want well believe some circumstances mitigating to some criminals...

b. Je crois bien que certains crimes ont des circonstances atténuantes...
I want well believe that certain criminals have HINT circumstances mitigating
'I am willing to grant mitigating circumstances to certain criminals'

² In this paper, I talk about linking patterns proper, i.e. principles governing the assignment of grammatical functions to semantic arguments, as well as mapping principles in general, i.e. the various principles regulating the mapping between semantic structure and syntactic structure (surface syntax within the monosynstral framework of this paper). I use the term linking to refer to linking proper, and use mapping to refer to the more general notion.

² My discussion in this section is for the most part a summary of the findings of Koenig (1993) to which I refer the reader for a more complete discussion of each point.
Third, the Dative Pattern constrains the semantic relation internal to the second semantic argument of the verb croire in sentences like (1a). More specifically, the relation which constitutes the main predicate of the believed proposition of (1a) must be one of extended-possession, where extended-possession is defined as literal possession or any output of a metaphorical mapping taking possession as its source domain (see sentences (6)-(10) for examples of the various semantic relations that can hold between the DO and IOBJ of (1a). See Lakoff et al. (1991) for more details on the mappings).

\section*{Ownership}

(6) Tiens, il a une Toyota. Je lui croyais une Renault 18.
Hold, he have PR a Toyota. I to.3SG believe IMPF a Renault 18.
‘Hmm! He has a Toyota. I thought he had a Renault 18’

\section*{Abstract Property}

(7) Je lui aimerais davantage d’enthousiasme
I to.3SG like.COND more of enthusiasm
‘I would like him to have more enthusiasm’

\section*{Inalienable Possession}

(8) Je lui crois le bras gauche plus fort que le bras droit.
I to.3SG believe.PR the arm left more strong than the arm right
‘I believe that he has a stronger left arm (than the right one)’

\section*{Social Relationships (Including Kinship)}

(9) Nous lui savons plusieurs contacts au pentagone.
We to.3SG know.PR several contacts at the Pentagon
‘We know that he has several contacts in the Pentagon’

\section*{Experiences (Events That Happen to an Individual)}

(10) Je lui prédis de nombreux accidents avec ce tas de ferraille.
I to.3SG predict.PR some numerous accidents with this heap of scrap
‘I predict that he will have a lot of accidents with this pile of junk’

Fourth, the linking subpart of this construction, i.e. the assignment of an IOBJ function to à certains criminels in (1a) is idiosyncratic to this pattern. Whether we choose to say that this à-PP denotes an extended-possessor or the extended-possession relation itself, there is no other linking rule with quite the same semantics (i.e. the notion of extended-possession I just defined) in the rest

of the grammar of French.

To account for all the facts just mentioned, we must introduce in the grammar of French a Linking rule/construction along the lines of the informal statement in (a):

**Dative Predication Linking rule:**

(a) If a non-verbal raising-to-object verb V has a propositional argument A whose predicate is the relation of extended possession (of the belong variety), realize A as an IOBJ.

What does the existence of language-specific patterns like the DP tell us about the nature of linking patterns in general? To answer this question, let’s consider the kind of information necessary to state the DP construction: (i) the syntactic category of lexical entries whose subcategorization requirements the DP specifies (i.e. that the DP applies to verbs here); (ii) some specific semantic condition on the subcategorization requirement the DP specifies the grammatical function of (i.e. that it denotes a relation of extended possession); (iii) the relationship between the DP and another mapping pattern (i.e. that the the DP is a subtype of non-verbal raising-to-object).

Although the French DP is relatively exceptional cross-linguistically, many other linking patterns are constrained by the same kind of information. First, Pinker (1989) and Goldberg (1992), among others, show that many valence alternations are sensitive to the detailed semantics of verbs. As we have seen, the same is true indirectly of the DP, which by virtue of being a subcase of non-verbal raising is constrained to apply only to verbs that denote certain kinds of relations. Furthermore, linking rules are also known to be sensitive to the
semantic type of the arguments whose grammatical function they specify. For example, locational and directional argument requirements must be satisfied by expressions which denote locational and directional predications. To be sure, the exact semantic relation relevant to the IOBJ assignment in the DP is more specific than that involved in many other linking rules. But there is no difference in kind as to the nature of the information relevant to the linking rule: in both cases, it is the semantic relation denoted by the dependent to which a grammatical function is assigned. The general kind of information the DP rule makes reference to is therefore not limited to this language-specific pattern. Other, more common patterns make reference to a combination of the syntactic category and semantics of the targeted lexical item and the syntactic category and semantics of the targeted subcategorization requirement.\footnote{Although the DP does not specify the syntactic category of the argument to which it assigns the IOBJ function, other linking constructions do. Consider the conative alternation in *Mary shot at John* which specifies not only that the patient argument must bear an oblique function, but that it must be realized by a PP headed by *at.*}

We may now ask ourselves the question: what groups together these various types of information? Why can mapping rules be sensitive to these four specific types of information? The answer, I suggest, lies in the nature of linking rules: mapping rules are word classes, the kind of information they can make reference to is therefore the kind of information found in lexical entries, the syntactic category and semantics of the entry and the syntactic category and semantics of its subcategorization requirements.\footnote{See Pollard and Sag (1994) and Fillmore and Kay (1993) for evidence that the subcategorization requirements of lexical entries contain both syntactic and semantic information.} In other words, if linking rules are word classes, we directly account for the identity of the informational domain relevant to mapping principles and lexical entries. Linking rules are classifications of words. Hence, they can make reference to any of the major classes of information which lexical entries can contain.

The first characteristic of the DP pattern I mentioned above — that it is a subcase of non-verbal raising-to-object — also indirectly supports the hypothesis that linking patterns are word classes. Classes are easily related to each other via set inclusion (or any formally more complex notion of set inclusion, like subsumption in attribute-value grammars). In this section, I have argued that the general characteristics of patterns like the DP lends support to the claim that mapping principles are word classes. In the next section, I present in some detail a specific linking theory based on this hypothesis. I then show how this approach can not only model the usual linking patterns as easily as other approaches, but that it can also account for more complex linking constructions like the DP.

2. A formalism for capturing generalizations

The formalism I use is a minimal variant of Typed Feature Structures, as defined in Carpenter (1992) and Pollard and Sag (1994) after the initial studies of Flickinger (1988) and Pollard and Sag (1987) on the hierarchical lexicon.\footnote{The two major differences between the typed feature structures system adopted here and the one presented in Carpenter (1992) are (i) that type definitions are not necessarily local, i.e. restricted to the immediate attributes of the type being defined; (ii) the type hierarchy is constructed on-line, and is not necessarily compiled in advance.} Basically, typed feature structures are like ordinary feature structures used in most brands of attribute-value grammars, except that feature structures are grouped into categories to form a hierarchy of more or less general types. One important aspect of this classification of feature structures into types is that feature structures can be classified by several cross-cutting dimensions, as if one were to classify animals not only by genetic similarities, but also by food habits, habitats, and so forth. Each dimension in this multi-dimensional hierarchy represents a linguistically relevant classification of grammatical objects or feature structures. In the somewhat simplified diagrams you will see, I use traditional attribute-value matrices to represent feature structures and write their types in italics at the bottom left of each attribute-value matrix or AVM. I represent the relation of subtype to type by drawing a line between the subtype below and its supertype above it, where $a$ is a subtype of $b$ iff it contains all the information contained in $b$ and maybe more.

In the specific framework being developed here, called Construction Grammar (see Fillmore and Kay (1993) for more details), lexical entries are stored radically underspecified, i.e. stripped of all predictable information, notably any information regarding the grammatical function and other syntactic aspects of their subcategorization requirements. Fully specified lexical entries, i.e. lexical entries used in the processing of actual sentences, are the result of combining the information of underspecified stored entries with that of various possible alternatives or choices in a hierarchy of linking and mapping patterns.
2.1 General linking constructions

A simple example will make this clearer. Take a sentence like (11):

(11)  Marc a mangé du poulet.
     'Marc ate some chicken'

The minimal, stored entry for French manger 'eat' only mentions the semantics of the entry, its syntactic category, as well as its having two subcategorization or valence requirements which must be satisfied (see Figure 1). The fully specified entry for manger which licenses sentences like (11), on the other hand, specifies the syntactic functions of the subcategorization requirements corresponding to the eater and food arguments and which semantic argument functions as the external argument (leaving aside the syntactic category of the subcategorization requirements, which is irrelevant here). It is represented in Figure 2. The entry in Figure 2, which is the fully specified entry for (11), results from the combination of the stored entry represented in Figure 1 with two types of mapping constructions.

Figure 1: The minimal entry for manger

Figure 2: The fully specified entry for manger

First, manger combines with an external argument assignment construction. The specific construction relevant to manger is represented in the top row of Figure 3. This construction says that semantic predicates one of whose participants is of type actor have this actor as their distinguished or external argument, where distinguished or external argument is a semantic notion here which does not necessarily entail that the corresponding syntactic dependent is realized structurally as a subject (i.e. external to the VP) at any level of representation. Another typical construction is diagrammed in the bottom row of Figure 3. This construction says that the external argument of predicates which denote a relation of semantic type REPRESENT (corresponding to the notion of having a representation, like know, believe...), is the participant role which can be analyzed as being of type experience. Obviously, these constructions are similar to the various AGENT and EXPERIENCER rules which have been assumed since Fillmore (1968) and Williams (1981), among others. There are several differences between the mapping constructions proposed here and such rules. First, ACTOR or EXPERIENCER in these constructions are simply meant as supertypes or abstractions over actual participant roles, like EATER or BELEVER, very much in the spirit of Dowty (1991) and Knowledge Representation systems (see Wilensky (1986) for an overview). In other words, what is primary in lexical entries is participant roles. So-called theta-roles are merely a classification of participant roles invoked by certain mapping and

Pound signs followed by identical numbers in the diagrams represent identity of structure. The diagrams are somewhat simplified, as well as stripped of all irrelevant information for the purposes of this paper; I also use three dots whenever the path leading to a given attribute is irrelevant. The attributes I use should be self-explanatory, but for the INSTANCE attribute, which stands for the referential index associated with each semantic object.
Second, as can be seen from a comparison of the two constructions in Figure 3, the rules determining the external argument of a predicate are specific to the types of situations denoted by various predicates. Each construction checks the semantic type of the relation denoted by the lexical entry and, if the denoted situation is of the right type, identifies the external argument of the verb with a participant role of a given type. Each construction does not consider any other argument of the relation denoted by the verb but the one which is assigned external argumenthood. Nor does it consider theta-roles of other entries in assigning external argumenthood. There is thus no theta-hierarchy, i.e. postulation of an abstract hierarchy of theta-roles, which is independent of the actual set of semantic arguments carried by a given predicate and which orders its entire set of arguments. External argument selection constructions merely distinguish one argument from all the others.

The difference between the two approaches is not merely conceptual. The theory presented here makes different predictions as to the class of possible linking rules from those made by theories which rely on a theta-hierarchy. To take but one example, within the theory presented here, either a linking rule targets the external argument (or the (complement) set of non-external arguments), or a linking rule targets a thematically specified argument. Linking rules cannot be constrained semantically in any other way. In all other cases, linking rules must therefore be free to apply to arguments of any semantic type. To put it differently, there can be no linking rule that mentions the second or third highest argument of a verb along the theta-hierarchy. To my knowledge, this prediction is borne out in English, French, and many other languages.

Third, there is no implication that there is a small set of predefined universal types of participant roles which are necessarily relevant for the determination of the external argument of a verb. In particular, it is not assumed that all predicates have their external argument specified by one of these constructions. Some predicates idiosyncratically specify their external argument, as in the case of undergo, or receive.

This last point illustrates one important general characteristic of the approach to linking advocated here. It is best explained by drawing a parallel with feature underspecification in non-linear phonology. Regular lexical entries, as mentioned before, are stored radically underspecified. The function of mapping constructions is to specify this underspecified information, so as to end up with a fully specified entry. Lexical entries which are irregular with respect to a given type of mapping construction—external argument assignment constructions in the case of undergo and receive—PRELINK or lexically PRE-SPECIFY the value of the relevant set of attributes; here, which argument is the external argument of the entry. Such prelinking prevents more general patterns from applying (see section 3 for more examples).

Figure 3: Two external argument constructions

Figure 4: The subject linking construction

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8 The specific formalism I use to implement semantic typing is adapted from Pollard and Sag (1994) and Tony Davis, p.c., who has been independently developing a linking theory within hpsg which shares many similarities with the one presented here.

9 In that respect, the theory of external argument assignment assumed here is closer in spirit to Fillmore (1977) who claims that meanings are relativized to scenes.
The second set of constructions necessary to account for sentences like (11) include linking patterns proper. Two are represented in Figures 4 and 5. The first construction says that a transitive verb (i.e. a verb of type TRANSITIVE) subcategorizes for a dependent bearing the OBJ grammatical function provided this dependent does not correspond to the external argument of the semantic representation of the verb. The second construction is the subject construction represented in Figure 5 which simply says that a verb can have one dependent bearing the subject function whatever its semantic type. We see with patterns such as the transitive and subject constructions that linking templates can be as

\[\text{sem [ext-arg #2]}\]
\[\text{syn [cat V]}\]
\[\text{val} \begin{cases} \text{sem [ #1]} \\ \text{gf obj} \\ \#1 + \#2 \end{cases}\]

Figure 5: The transitive linking construction

general as necessary, as in other approaches to linking. In fact, the three constructions just mentioned, the actor external argument mapping construction and the transitive and subject linking constructions are not incommensurable with various current proposals within both LFG and GB. They are as general as more well-known descriptions of these patterns and use a comparable amount of information. Well-known linking patterns are thus as easily represented in a theory that views linking patterns as abstract word templates as they are in other theories.\(^\text{10}\)

What distinguishes more particularly the word class approach to linking, though, is its ability to model less ordinary linking patterns using the same notion of word templates and the same formal mechanism of typed feature structures. More language-specific or idiosyncratic templates are simply less general, less abstract templates than the ones I just discussed. They do not require added formal stipulations. Let’s see, for example, how we can describe the Dative Predication pattern within the approach to linking just outlined.

\(^\text{10}\) Even so, there are significant conceptual and empirical differences between the approach taken here and more traditional approaches, some of which I mentioned when discussing the status of theta-roles and the theta-hierarchy.

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First, we need to describe non-verbal raising, exemplified in (2). The construction is represented in Figure 6. Aside from its restricting raising to non-verbal predicates, like heureux in (2), this pattern simply identifies the subject subcategorization requirement of the non-verbal predicate with a subcategorization requirement of the predicate the non-verbal predicate depends on, i.e. voir in (2), as is standard in both HPSG, LFG, and CG, and is indicated in the diagram by #1. Now, as I mentioned before, the Dative Predication construction only applies when non-verbal raising applies. This means that any fully specified lexical entry which instantiates the Dative Predication pattern also instantiates the non-verbal raising pattern. Formally, the Dative Predication construction is declared to be a subtype of the non-verbal raising construction, as indicated in Figure 6 by the line joining the two types in the diagram.\(^\text{11}\)

\(^\text{11}\) The points at each end of the line are the AVM representations of the type declaration for each construction. The line joining the two types is meant to be iconic for the relevant subpart of the type hierarchy, where being lower entails being a subtype of. Note that I have included the general definition of raising structure in the
Given such a declaration, we need not repeat in the statement of the Dative Predication construction all the information contained in the non-verbal raising construction. The presence of this information in any verb to which the DP applies is entailed by the fact that the Dative Predication is a subtype of non-verbal raising. We only need to specify what is added by the Dative Predication pattern. As shown in the bottom AVM of Figure 6, we therefore only need to say that the semantic relation denoted by the non-verbal predicate dependent of this special kind of non-verbal raising-to-object is a relation of extended-possession, its grammatical function, IOBJ, and that the (extended)-possessed object of this non-verbal predicate is the external argument of this PP (and will thus turn out to be the target of raising).12

When applied to *vouloir as used in (1a), the construction described in the bottom AVM of Figure 6, ensures that the IOBJ à certains criminels receives the right semantic interpretation and that its external argument, des circonstances atténuantes is raised. Our ordinary TRANSITIVE and SUBJECT constructions then apply, as they would in any ordinary sentence, like our (11) above. Note that I did not use any new mechanism to account for the idiosyncratic, language-specific DP pattern. I simply used the notion of type hierarchy and abstraction over fully specified phrases or words which is used in all areas of grammatical structure to capture generalizations within CG and HPSG: morphology, constituent structure, including the description of our most general linking patterns. Although there is a difference of degree in the amount of information linking templates like the DP and the transitive constructions require any verb they apply to to contain, the two patterns are the same kind of object, i.e. a word type (i.e. a subtype of the WORD type). Assuming linking patterns to be word classes thus leads to a theoretically parsimonious description of language-specific linking rules, by allowing us to vary levels of abstraction within the statement of each linking pattern and to relate more complex patterns to simpler patterns they informationally contain. In the next section, I illustrate further with some other examples of French linking constructions the latter use of the word class hypothesis.

3. Other examples

3.1 Positive absolute exceptions

The approach to linking outlined above easily handles cases where a rule/construction which is optional otherwise must apply in the case of a specific lexical item (what Lakoff (1970) called “positive absolute exceptions”). Take the verb *prêter in French, as illustrated in example (12a):

(12) a. On lui prête l'intention de démissionner.

3.INDEF 3SG.DAT lend.PRES the intention of resign.INF

‘People say he will resign’

b. *On prête qu'il a l'intention de démissionner.

3.INDEF lend.PRES that he have.PF the intention of resign.INF

*Prêter has a special meaning in this pattern, something like say with the added nuance that the speaker makes explicit its non-commitment to the truth of the statement. It only occurs in the Dative Predication with this meaning (see (12b)). To capture the fact that this lexical entry is an instance of a well-established French linking pattern and is not completely arbitrary in its surface syntax, we only need declare one entry for *prêter to be an instance of the Dative Predication construction. Its irreducible stored information can thus be reduced to the minimum, as shown in Figure 7, where the minimal entry for *prêter at the bottom left of this partial type hierarchy does not contain more information than what was in the minimal entry for manger except for the specification that *prêter necessarily inherits the Dative Predication pattern. The familiar distinction between productive and unproductive patterns is here simply a distinction between a word class being defined by a specification of common properties of its members, or by their mere listing. Moreover, a single pattern can use both ways of specifying the word classes it applies to, as the DP construction illustrates. By inheritance, the general DP construction specifies the classes of verbs to which it applies productively, i.e. any verb whose denotation is of type SAYING REPRESENT. Within these classes, the DP is productive. But there are also idiosyncratic subcases of the DP construction. Each of these subclasses is specified by listing its members, like *prêter.

3.2 Localizing Global Rules

The well-known French clause-union structures and particularly the rule/pattern responsible for the assignment of the IOBJ function to the external argument of the complement verb in sentences (16)-(19), illustrate a second additional advantage of the word class sum inheritance view of linking.
cases where FAIRE-A applies to syntactically transitive dyadic complement verbs, as shown in (17). The two patterns are therefore distinct. Moreover, some dialects (not mine, though) apparently allow even the external argument of monadic complement verbs to be realized as an IOBJ under the same semantic conditions, with the added syntactic constraint that the IOBJ be always realized as a clitic (lui in (19)). Given the differences in semantic and syntactic constraints bearing on these patterns, we must recognize at least two and even three FAIRE-A linking rules for those speakers which accept sentences like (19). Moreover, these three FAIRE-A patterns are specific to clause-union structures and cannot be predicted from other French linking patterns, a point already made for transitive FAIRE-A by Baker (1988). 13

As in the case of the DP construction, we therefore need to make the application of FAIRE-A dependent on the application of clause-union. We can easily accomplish this by (i) positing an abstract clause-union construction which does not specify the GF of the external argument of the complement verb, but merely merges two subcategorization sets; (ii) having this abstract construction be inherited by or be a supertype of the general FAIRE-A construction, which assigns an IOBJ function to the raised external argument of the complement verb, (ii) having each specific FAIRE-A construction inherit from the general FAIRE-A construction, as succinctly illustrated in Figure 7.

Notice that inheritance of word classes, as used here, allows us to capture in a constrained fashion and via a mechanism amply motivated elsewhere in the description of natural languages, what would have been basically global rules in old TAG, as seen in the condition (B) on the application of the dyadic, intransitive version of FAIRE-A and where 'only applies if' replaces the information-theoretic notion 'is subsumed by':

(B) The dyadic, intransitive FAIRE-A construction only applies if the controlled event FAIRE-A construction applies. This pattern, in turn, only applies if the general FAIRE-A applies, which is itself dependent on the application of the general clause-union construction.

The two uses of typed feature structures I mentioned in the last two subsections are very similar. In both cases, we specify a class of words to be a subclass of another subclass. The first case is simply the degenerate case where a subclass contains only one member. In the next section, I present a somewhat different example. I show that treating linking patterns as word classes allows us to capture the common structure among patterns which are not necessarily all

13 Some scholars have tried to derive the assignment of IOBJ in the general FAIRE-A construction from more general facts about Romance. I cannot review the evidence against such a proposal here. Note, though, that, if true, this fact would not detract from my main point in this section, since the controlled event FAIRE-A linking constructions are uncontroversially restricted to clause-union contexts.
linking patterns, but are all word class constructions.

Figure 7: The French raising type hierarchy

3.3 Abstraction over different types of rules/constructions

As is well-known, French reflexive verbs are used for many different purposes: for ordinary co-reference or reciprocal interpretation (20a), for deriving inchoative verbs from lexical causatives (20b), i.e. for a process which belongs to derivational morphology, for a linking pattern very similar to passive (20c), and idiosyncratically with verbs like _en aller_ 'to leave' (20d) or _se ficher_ 'to make fun'.

(20)  
a.  Ils se sont regardés.  
Marc REFLEX be.PR look.PPT  
'They looked at themselves/each other'

b.  Le vase s'est brisé.

c.  Le Gazpacho se mange froid.  
The Gazpacho REFLEX eat.PR cold  
'Gazpacho is eaten cold'

d.  Jean s'est en allé.  
Jean REFLEX be.PR of it go.PPT  
'Jean went away'

The syntactic consequences of being a reflexive verb are always the same, though. (i) The verb requires (or subcategorizes for) a reflexive clitic which can attach directly to the verb, or can be passed onto an auxiliary as in (20c) vs. (20a). (ii) This clitic must agree in person and number with the subject. (iii) The auxiliary marking pretérit past tense is être and not avoir, when its complement is a reflexive verb.

We can capture this entire set of morphosyntactic properties which are shared among all constructions marked by a reflexive marker by positing an abstract reflexive type, represented at the top of the type hierarchy in Figure 8 that all the more specific patterns mentioned in the diagram inherit. Witness the case of the passive reflexive or _se-meyer_, which simply says that the external argument need not be realized syntactically (marked in the diagram by the GF a). What is specially interesting in this last example is (i) that the abstract reflexive construction which is shared is an abstract morphosyntactic Construction, not a linking pattern _per se_ and (ii) that the types which share the abstract reflexive construction belong to what are usually considered very different areas of grammar: linking principles proper, as in the case of the passive reflexive or _se-meyer_, derivational morphology, as in the case of the inchoative reflexive, and binding constructions. Finally, as with other instances of word classes, the abstract reflexive construction also applies idiosyncratically to a few inherently reflexive verbs like _en aller_ 'to leave' or _se ficher_ 'to make fun'. Under a view that linking patterns, derivational morphology, and morphosyntactic patterns are all word templates, i.e. classification of actual entries, although along different dimensions, such an interaction between these

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14 Many other scholars have considered what is common among all reflexive uses in Romance, (see Zabini-Hertz (1980) and Wehrli (1986) among others). I cannot review these various proposals here. My point is simply that word typing offers an elegant way of explicitly capturing the common morphosyntactic manifestation of reflexivity in Romance.
approach to linking as word classes: it allows for a truly declarative, bottom-up approach to the problem, with all the usual benefits from a learning and processing perspective of approaches where hypothesized abstract structures not directly reflected in surface patterns are reduced to a minimum.

References


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Figure 8: The French reflexive-verb type hierarchy

Various patterns is expected and easily modelled.

Conclusion

Part of the motivation for having different levels or representation in generative linguistics has come from the desire to represent what is common among various surface patterns. In a flat grammar, i.e. in a grammar where rules and principles can bear no relationship to each other, this might be the easiest way to go. What I hope to have shown is that if we allow for a hierarchical organization of grammars, i.e. grammars where linguistic objects can be related to each other in a multi-dimensional abstraction hierarchy, this motivation for multi-stratalism might well disappear. In particular, the same high-level generalizations and regularities that proponents of multi-stratal approaches have pointed out in favor of their organization of grammars are easily captured and accounted for. Of course, as I suggested in this paper, taking a hierarchical view of grammars in general, and linking patterns in particular, has independent advantages. Less general patterns do not force us to alter our principles and our theory of the nature of linking. Observable dependencies between patterns can be accounted for without resorting to ad hoc mechanisms, like context-sensitive rules or global rules. But there is one more reason to prefer *ex traes paribus an*


