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## AUTONOMOUS SYNTAX AND PRELEXICAL RULES

Any adequate explanation of the fact that native speakers distinguish between well-formed and unwellformed sentences requires the assumption of underlying structures (with an ultimate deep structure, DS) for every surface structure of a sentence. The syntax of a language consists of those rules which transform given deep structures into surface structures.

Any adequate explanation of the fact that native speakers distinguish between what a given sentence can and cannot mean requires the assumption of a semantic analysis, or semantic representation (SR) for every sentence in a given meaning. Without semantically explicit SR's a native speaker would be unable to distinguish the way he does between different meanings. SR's, however, are themselves syntactic objects in the sense that they are linguistic structures with their constituent analysis. Thus it follows that native command of a language must comprise rules which relate surface structures to SR's in certain specified ways. These semantic rules are transformational, since they relate tree structures to tree structures.

The empirical question now arises of the identity or non-identity of the two sets of transformational rules, the syntactic and the semantic ones. There are three possibilities: either the two sets of rules are totally separate, or they are totally identical, or they overlap. In the latter case it must be specified which is the area of overlap. Only two of these three alternatives are still up for serious consideration, the first one being untenable in the light of present knowledge<sup>(1)</sup>. The second alternative we call "Semantic Syntax" (also known as "Generative Semantics"); the third "Autonomous Syntax" (also known as "Interpretive Semantics").

(1) See my article "Autonomous versus Semantic Syntax", *Foundations of Language*, 8 (1972), pp. 237-265.

Chomsky, who defends Autonomous Syntax, maintains that syntactic DS is characterised mainly by the fact that it contains all lexical items which occur in the surface structure, and defines their functional relations with respect to each other (subject, object, indirect object, main verb, etc.). These aspects are among those needed for a semantic analysis. This theory, therefore, maintains that syntactic transformations affecting relational constituents (subject, object, etc.) are meaning-invariant and form the overlap area with semantic rules. All further semantic analysis, including internal semantic analysis, is non-syntactic, and purely semantic.

Some lexical items are semantically complex (such as McCawley's famous example *kill*). Their semantic components are scattered over SR-trees. Transformations are needed, therefore, to collect the scattered elements into a single node, and hence item <sup>(1a)</sup>. If it can be shown that such "prelexical" transformations have an explanatory function in syntax, Chomsky's version of Autonomous Syntax is invalidated. An analysis of the French syntactic constructions of the verbs *faire* and *laisser*, and a comparison with English (or other) causative lexical verbs will provide arguments in favour of the syntactic status of prelexical rules.

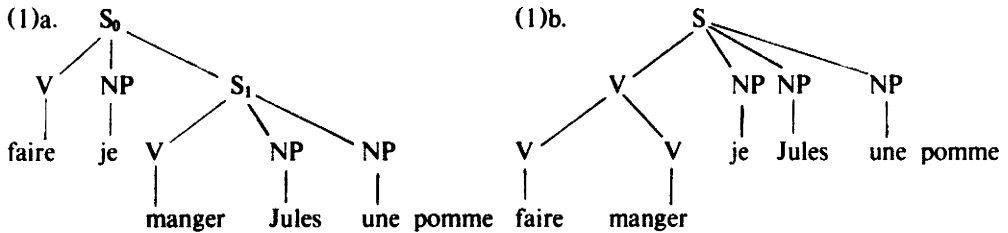
It can be shown, in particular, that there are a number of striking parallels between certain restrictions holding for the French *faire*-construction and those for causative verbs. These parallels would be explained if there appeared good reasons for assuming that these restrictions result from universal peculiarities proper to *lexical islands*. A lexical island is any subtree which is dominated by a single category node (*V, N, A*, in principle).

In a recent paper <sup>(2)</sup> I have put forward an argument to show that the French *faire*-construction crucially involves McCawley's rule of Predicate

(1a) There is no implication, in this paper, that the non-lexicalised lexical islands correspond in every respect semantically with the lexical items that are given as their counterparts. Thus, there is no claim that, e.g., *laisser partir* in (4a) below is the precise equivalent of *relâcher* in (4b). What is implied is that the lexical item contains at least some skeletal structure which is similar to, or perhaps in some cases identical with the non-lexicalised lexical island. The details of the problems involved in the lack of precise correspondence between items and islands are far from clear. It should be observed, however, that these problems are not inherent to the theory proposed here. They exist for any adequate description of a language.

(2) "Predicate Raising and Dative in French and Sundry Languages", unpublished, 1972. (Obtainable from LAUT, Universität Trier, D-55, Trier, Germany).

Raising, which is thereby attested for pure "post-lexical" syntax. The rule has the following effect :



after which the NP *Jules* is obligatorily given the preposition *à* and is swivelled around the object *une pomme*. Predicate Raising (PR) thus results in the formation of a lexical island [faire manger].

If it is assumed that lexical islands, whether syntactically complex (as in (1b)) or syntactically simple (as in the case of a single lexical item under the category node), have special properties, we have a basis for an explanation of a number of facts. First, there are Fodor's observations<sup>(3)</sup>, which purport to show that *kill* cannot be derived from "cause to die". He observes that of the following pair the first is ambiguous, but the second is not :

- (2) a. John caused Harry to die by throwing a bomb.  
 b. John killed Harry by throwing a bomb.

In (2a) it is not clear who threw a bomb : it can be either John or Harry, whereas in (2b) it can only be John. This cannot be used as an argument against deriving *kill* from "cause to die", however, since if it could, it would follow that *faire mourir*, in French, cannot be derived from *faire mourir*! This appears from the fact that in French, the ambiguity of (2a) does not arise : both of the following two sentences imply that the bomb-thrower was Jean :

- (3)a. Jean a fait mourir Henri en lançant une bombe.  
 b. Jean a tué Henri en lançant une bombe.

The same observation can be made with respect to *laisser*, but only if *laisser* takes the *faire*-construction<sup>(4)</sup> :

(3) J. A. FODOR, "Three Reasons for not Deriving 'kill' from 'cause to die'", *Linguistic Inquiry*, 1 (1970), pp. 429-438.

(4) Predicate Raising, and thus the *faire*-construction, is not the only possible con-

- (4) a. Jean a laissé partir Henri sans dire un mot.  
 b. Jean a relâché Henri sans dire un mot.

Here, too, the person who did not say a word can only have been Jean, not Henri. But, and here we see an indication of the crucial importance of the notion of lexical island, when *laisser* does not take the *faire*-construction, but Subject-Raising (or perhaps Equi-Deletion), the ambiguity of (2a) reappears :

- (5) Jean a laissé Henri partir sans dire un mot.

Here, the subject of *dire* is either Jean or Henri. The suggestion made here is that the difference is due to the fact that in (3a) and (4a) a lexical island is formed (although no subsequent lexical insertion takes place), whereas in (5) no lexical island results, as in (2a). It is the lexical island which unites (3a) and (4a) with (2b), (3b) and (4b), where lexical insertion for the lexical island has taken place. What the precise restrictions are which rule out one reading for the sentences of (3) and (4) will not be discussed here<sup>(5)</sup>. We simply point out the regular correspondences between syntactic constructions which imply a lexical island and parallel constructions involving a fully lexicalised item (*kill, tuer, relâcher*).

The observations made above are reinforced by the fact that it is easy to provoke ungrammaticality by imposing "improper" readings through syntactic means :

- (6) a. J'ai fait parler Jean sans m'asseoir.  
 b. \*J'ai fait parler Jean sans s'asseoir.
- (7) a. J'ai laissé partir Juliette sans me déshabiller.  
 b. \*J'ai laissé partir Juliette sans se déshabiller.  
 c. J'ai laissé Juliette partir sans se déshabiller.

struction that *laisser* can take. It can also take a construction which has an output similar to English *let* or *make*, where the embedded (infinitive) verb is not as closely linked to the higher verb as is the case after PR : *J'ai laissé Henri partir*. The deep structure of this sentence is probably not quite the same as that of *J'ai laissé partir Henri*, as appears from the subtle semantic difference between the two. In the former sentence one imagines Henri already starting to leave : the sentence then says that I let him go his way. In the latter sentence no such implication is detectable. It is a matter of doubt whether the non-PR version of *laisser* involves Subject Raising or Equi-NP-Deletion. Yet the question is not relevant here.

(5) This is discussed in more detail (but far from finally satisfactorily) in my paper "Referential Constraints on Lexical Islands", unpublished, 1974 (also obtainable from LAUT).

The last sentence, (7c), is grammatical because the understood subject of *se déshabiller* can be Juliette, so that the 3rd person reflexive is in order, as opposed to (7b). (7c) does not involve a lexical island consisting of *laissé* and *partir*.

The parallelism noted between lexical items and lexical islands is an argument in favour of the syntactic status of the prelexical transformations which bring together the various semantic elements of the words concerned under one single category node, so as to make lexical insertion possible. The argument rests on the fact that the same, or at least partly the same, processes and restrictions seem to be at work in the unsuspectedly syntactic *faire*-construction as in the case of the lexical items.

This parallelism is also observed in another way. It is possible to have a double embedding of *faire* in French :

(8) Je ferai faire entrer le monsieur.

There are, however, strict limitations on double causative embeddings. Thus, the second *faire* must be passivized: sentence (8) can be supplemented with, e.g., *par Jean*, and not by *à Jean* :

(9) a. Je ferai faire entrer le monsieur par Jean.

b. \*Je ferai faire entrer le monsieur à Jean.

This is probably due to a restriction on the number and kind of surface structure constituents. There is already an uneasy feeling when the deepest embedded S is transitive. In (8) this S is intransitive (*entrer le monsieur*), but if it were, e.g., *voir Paul la lettre*, we would get the doubtful, but perhaps still marginally possible :

(10) \*?Je ferai faire voir la lettre à Paul (par Jacques).

which is, in more analytic terms :

(11) Je ferai en sorte que Jacques fasse en sorte que Paul voie la lettre.

If the second embedded S (with the verb *fasse*) were not passivized, there would be a crowd of constituents pressing for surface structure status <sup>(6)</sup>.

(6) Cf., for example, a recent paper by Ray CATTELL, "On Constraints on Movement Rules", unpublished, University of Newcastle, N.S.W., Australia.

I now no longer believe in the observations made in note 6 of my 1972 paper (note 2 above). I do allow there for two datives in the same S :

(i) Je ferai écrire à Jean une lettre au directeur.

Although (i) seems marginally acceptable, the second *à*-phrase does not behave as a full

*Paul* becomes a dative, *la lettre* becomes accusative, but there would be no status for *Jacques*, — a second dative not being allowed. Passive seems the only way out.

The rule of Predicate Raising gives a lexical V-island for [ferai [faire entrer]] in (8). The expectation is that there should also be verbs with a double causative analysis. This seems indeed to be the case. We have, for example, normal extensions of ordinary causatives to bi-causatives:

(12) This judge has hanged too many innocent people.

Here the verb *hang* means “cause to be made to hang” (“hang by proxy”), since the judge will not normally be taken to do the hanging himself. (It is not really material here to ask whether this extension of ordinary causative *hang* to bi-causative *hang* is “metaphorical” or a stylistic licence, or what have you. What is material is that such an extension is possible, and that it can be done in certain ways but not in others.)

There are also, however, verbs which are bi-causative *per se*, such as *proscribe*, or *extradite*, meaning “cause to be made to live abroad” and “cause to be made to get into the hands of foreign authorities” (“cause to be handed over”), respectively (7). In general, bi-causatives seem to relate to official actions of persons in authority, who tend to have their decisions carried out by proxy.

The relevant fact here is that bi-causative lexical items show the same restriction on the second embedded causative verb: it has to be passive. The parallelism is explained when it is assumed that bi-causative lexical items have the same origin as bi-causative *faire*-constructions. Overcrowding of constituents then imposes certain constraints on deeper embeddings. The following two sentences will then be ungrammatical for the same reason:

nominal constituent under *écrire*. It is more likely to be an attributive adjunct to *une lettre*: [une lettre au directeur]. Clefting, for example is not possible for *au directeur*:

(ii) \*C'est au directeur que je ferai écrire à Jean une lettre.

(iii) C'est au directeur que je ferai écrire une lettre à Jean.

This last sentence can only be interpreted with *au directeur* as semantic (deep structure) subject to *écrire*. The sentence:

(iv) \*C'est une lettre en anglais que je ferai écrire au petit Robert au Père Noël. must be regarded as ungrammatical, and not as grammatical (as I did in note 6 of my 1972 paper).

(7) Other examples are *banish*, *exile*. Richard Carter rightly observes (paper read at Oxford on June 7th, 1974) that no (other) bi-causatives occur as lexical items. I add that they do not occur as syntactic PR-constructions either.

- (13) a. \*Le ministre brésilien n'a pas fait renvoyer Biggs au gouvernement britannique à la police brésilienne.  
 b. \*The Brazilian minister did not extradite Biggs to the British Government to the Brazilian police.

(It will still have to be explained why (13a) is grammatical with *par* for *à*, but (13b) is still not grammatical with *by* for the second *to* : we shall come to that in a moment.)

The same strategy seems to be followed by human grammars when causative verbs are embedded under a Predicate Raising verb such as French *faire*. It is noted in Seuren (1972), but not explained, that some verbs take obligatory Passive under *faire*. Thus (14a) is ungrammatical, and (14b) is not ambiguous but can only be understood with the dative as dative of *montrer*, no as its subject :

- (14) a. \*Je ferai tuer les prisonniers à mes soldats.  
 b. Je ferai montrer la lettre à Paul.

Both *tuer* and *montrer* are causative verbs. If it is indeed the case that the danger of overcrowding of constituents in some cases leads (or may lead) to a general constraint in grammar, we can understand this obligatory Passive, since there would be overcrowding in the case of embeddings with a causative verb taking three full nominal arguments : subject, object, indirect object :

- (15) Je ferai [montrer Jacques la lettre à Paul]

It is significant that, in French, the obligatory Passive constraint on the second causative is not valid when the subject of the second causative is pronominal. In this case, the pronominal subject is made into a dative and cliticised, i.e., made part of the V-node. It does not then occupy a nominal slot in surface structure :

- (16) a. Je lui ferai tuer le prisonnier.  
 b. Je lui ferai montrer la lettre à Paul <sup>(8)</sup>.

We thus have two conspicuous parallels between the *faire*-construction and causative verbs : (1) subject deletion in semi-sentential complements

(8) See my "Zero-Output Rules", *Foundations of Language* 10 (1973), pp. 317-328, for a discussion of the question of why *à Paul* in (16b) cannot be pronominal.

is dependent on the subject of the highest S, i.e., the subject of the highest *faire*; (2) in bi-causatives the second causative is obligatorily passivized, or, in other words, the subject of the second causative is removed. The parallelism does not go all the way, however. In particular, we notice that there is a marked difference between the behaviour of causative verbs on the one hand and the *faire*-construction on the other with respect to non-sentential but S-derived complements. The complements in (2)-(5) have been called "semi-sentential" because they are S-derived but have lost their subject. When they also lose their verb, which is replaced by a nominalised form, they are called here "non-sentential". Compare (3) and (4) with :

- (17) a. Jean a fait mourir Henri sans regret.  
       b. Jean a tué Henri sans regret.
- (18) a. Jean a laissé partir Henri sans regret.  
       b. Jean a relâché Henri sans regret.

Quite clearly, the (a)-sentences are ambiguous as to who had no regrets, but the (b)-sentences are not: there Jean has no regrets about either killing or releasing Henri.

In the same way we notice a marked difference between :

- (19) a. Jean a fait mourir Henri le dimanche en le poignardant le samedi.  
       b. Jean a tué Henri le dimanche en le poignardant le samedi.

The (b)-sentence is most odd, since it expresses a strange contradiction. Some would call it ungrammatical. This brings us to another observation made by Fodor (see note 3), to which our lexical island theory provides no answer :

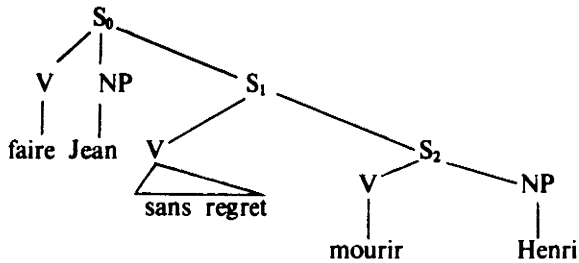
- (20) a. John caused Harry to die on Sunday by stabbing him on Saturday.  
       b. John killed Harry on Sunday by stabbing him on Saturday.

(Fodor regards (20b) as ungrammatical.)

This lack of parallelism does not, however, destroy the lexical island theory. It just shows that there are differences between non-lexicalised lexical islands and fully lexicalised lexical islands (i.e., items). Let us take the following as an approximate deep structure for (17a), with *Henri* as subject of *regret* :



(21)



where the V of S<sub>1</sub> (*sans regret*) is derived from a full embedded S of the form “sans [avoir Henri regret]” or something similar<sup>(9)</sup>. Apparently, this element *sans regret* does not form an obstacle to the *faire*-construction (i.e., syntactic post-lexical Predicate Raising), but it does to full lexicalisation. If, on the contrary, the V of S<sub>1</sub> had been, e.g., *sans rien dire*, i.e. with a full verbal form, it would have been an obstacle to both post-lexical and pre-lexical Predicate Raising, as appears from (2)-(5). That is, in (21) *sans regret* is lowered on the S<sub>1</sub>-cycle into S<sub>2</sub>, and PR then applies on S<sub>0</sub>. The process would be blocked, however, if (a) *faire mourir* were to be replaced by a single item, or (b) the V of S<sub>1</sub> contained a full verbal form. (This blocking would require a form of global constraint roughly in the sense of Lakoff.<sup>(10)</sup>)

The same difference is seen at work in the fact that bi-causative verbs do not allow for a *by*-phrase even though the second causative is passivized, whereas the bi-causative *faire*-construction does allow for a *par*-phrase (see what was said in connection with (13) above). For this ex-

(9) It is assumed here that *sans regret* is a deep structure V (or at least that from which it is derived is a DS-V), since it behaves as an operator, and all operators are considered DS-verbs. (See, for this point, J. D. McCawley, “A Program for Logic”, in Davidson Harman (eds.) *Semantics of Natural Language*, Dordrecht-Holland, 1972, pp. 498-544; also Seuren, “Negative’s Travels”, in Seuren (ed.) *Semantic Syntax*, Oxford, 1974, pp. 183-208). The operator behaviour of *sans regret* appears from the scope difference between, e.g.:

- (i) Il n'est pas parti sans regret.
- (ii) Sans regret, il n'est pas parti.

The last sentence has as one of its possible readings “he stayed without regret” (another possible reading is one where *sans regret* applies to the performative: “I tell you without regret that he did not leave”, — a use which is idiomatic for, e.g., *sans blague*).

(10) G. LAKOFF, “Global Rules”, *Language*, 46 (1970), pp. 627-639. (Also in Seuren (ed.) *Semantic Syntax*, Oxford, 1974, pp. 143-156.)

planation to be valid it must be assumed that the *by-* (or *par-*) phrase has the function and position of an operator in deep structure, just as semi- or non-sentential complements. That this is so, will appear, e.g., from the following observations :

- (22) a. Many foreigners were expected to apply.  
 b. Many foreigners were expected by the Vice-Chancellor to apply.  
 c. It was expected that many foreigners would apply.  
 d. It was expected by the Vice-Chancellor that many foreigners would apply.
- (23) a. The victim was believed to be Spanish or Italian.  
 b. The victim was believed by the police to be Spanish or Italian.  
 c. The victim was either believed to be Spanish or Italian.  
 d.\*The victim was either believed by the police to be Spanish or Italian.

We detect a scope ambiguity in (22a) : the phrase *many foreigners* is either specific (largest scope) or non-specific (smaller scope : under *expect*). (22b), however, only allows for the wider scope. Likewise, (22c) is ambiguous (with a preference for the smaller scope), but (22d) only allows for the smaller scope reading. In (23a) we also detect a scope ambiguity : *or* can be taken with larger scope (above *believe*) or with smaller scope (below *believe*). But in (23b) *or* can only have the smaller scope. In (23c) *either* determines the larger scope reading. In (23d), however, there is a clash between the larger scope reading imposed by the position of *either* and the position of *or*, which is on the right of the *by*-phrase so that a smaller scope reading is called for. Hence its ungrammaticality.

We thus notice that the *by*-phrase behaves in every respect as an operator : it follows the left-to-right ordering constraint which has been observed for operators by many linguists since the mid-60s. This being so, we can give to the *by-* (*par-*) phrase a position in deep (or semantic) structure similar to that of *sans regret* in (21). This explains why *par*-phrases do occur in *faire*-constructions, but not with lexical items.

In general, it seems that a careful investigation of the French *faire*-construction (and its PR-analogs in many other languages) and a comparison with the behaviour of causative verbs throws considerable light on questions of pre-lexical syntax.