A Note on Anaphoric Islands and Causatives*

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The constraint given by Postal,[1] forbidding outbound anaphora in the case of lexical items, correctly predicts that the (b) sentences below are ill-formed, on the reading where the pronoun is taken to be anaphoric.

(1) a. The person who lost his parents misses them.
b. *The orphan misses them.
(2) a. A man who plays the guitar bought one yesterday.
b. *A guitarist bought one yesterday.

However, Postal's constraint does not distinguish between the different degrees of ill-formedness in these cases. (1b) is much worse than (2b). The difference is that in (2b) the lexical item *guitarist* is morphologically related to the supposed antecedent of the pronoun, *guitar*; whereas in (1b) *orphan* bears no morphological relationship to *parents*, the antecedent of *them*. Thus we might suggest the following principle:

I. With lexical items, outbound anaphora is always impossible where the antecedent is not morphologically related to the lexical item; where there is a morphological relationship, outbound anaphora is not quite so unacceptable.

Thus, we might mark (1b) with "*" and (2b) with "?*".

If one considers other examples, it becomes clear that there is a further differentiation in cases like (2b) where there is a morphological relationship between the antecedent and the lexical item. The (a) sentences below have about the same degree of ill-formedness as (2b), that is, ?*. The (b) sentences, on the other hand, are much better. For some speakers, they are perfectly grammatical; for others they are just slightly bad, meriting perhaps only a "?".

(3) a. ?*The guitarist thought that it was a beautiful instrument.
b. ?John became a guitarist because he thought that it was a beautiful instrument.
(4) a. ?*New Yorkers think that it's a swinging city.
b. ?I know many New Yorkers and they all think that it's a swinging city.
(5) a. ?*McCarthyites voted for him, but he lost.
b. ?McCarthyites are sad, because they voted for him and he lost.

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[1] Cf. Postal (1969).

(6) a. ?*Sam doubled with the same bat that Harry hit one with.
b. ?Sam doubled with this bat in the seventh, and Harry hit one with the same bat in the ninth.

The difference between the (a) and (b) sentences is that in the (a) sentences, the lexical item commands the pronoun, while in the (b) sentences, the lexical item does not command the pronoun. Thus, we might suggest the following revised principle:

(II) Outbound anaphora from lexical items admits of three degrees of deviance:

A. If the lexical item and the antecedent are not morphologically related, the sentence is unacceptable (*).
B. If the lexical item and the antecedent are morphologically related and if the lexical item commands the pronoun, the sentence is judged as deviant, but not to the same extent as starred sentences (?*).
C. If the lexical item and the antecedent are morphologically related and the lexical item does not command the pronoun, the sentence is either of moderately questionable acceptability (?) or fully grammatical, depending on the idiolect of the speaker.[2]

[2] Actually, the notion of "morphologically related" requires a far more careful investigation than we can make here. Thus it seems to us that there is a difference between the sentences of (i) and those of (ii) (this latter example is due to David Perlmutter):

(i) a. ?Flutists are a strange breed: it appears not to sound shrill to them.
b. *Flautists are a strange breed: it appears not to sound shrill to them.
(ii) a. ?Pianists [piyǽnists] are a strange breed: they like its percussive qualities.
b. ?*Pianists [píyənists] are a strange breed: they like its percussive qualities.

What seems to be playing a role here is not mere morphological complexity (obviously, *pianist* contains the same morphemes, however it is stressed), but rather *surface phonetic analyzability*. That is, if a morphologically complex form contains a phonetic subsequence identical to a subsequence of the phonetic representation of the isolated form of the anaphoric element, outward anaphora is more possible, for us.

In addition, it seems that the productivity of the morphological process which formed the morphologically complex anaphoric island also plays a role. Thus we find the sentences in (iii) to increase in acceptability:

Principle II makes a rather interesting prediction with respect to the analysis of causative sentences. Consider the analysis of causative verbs proposed in Lakoff (1970) and discussed subsequently in McCawley (1968). According to this analysis, verbs of causation would have an underlying syntactic analysis paralleling their semantic analysis. Consider:

(7) Sam liquefied the metal.
(8) Sam killed Boris.

In each of these sentences, *Sam* would be the subject of a two-place predicate of causation, taking an object complement. In (7), the object complement would have the content of *the metal liquefied* and in (8) the object complement would have the content of *Sam died*. Greatly oversimplified, the structures would look basically like (7′) and (8′) below.

By the rule of Plugging-In (Lakoff 1970) or the equivalent Predicate Raising (McCawley 1968), the lower verbs are raised up to *cause*, and later lexical insertion yields *liquefy* and *kill*. Note that in the former case, the derived transitive verb *liquefy* is morphologically related to the corresponding intransitive verb, while in the latter case, *kill* is not morphologically related to *die*. This fact, together with Principle II and the analysis given above, makes a prediction. Since both of the cases above contain object complements, one would expect that, if there were no impeding principles, it should be possible to find sentences where the pronoun *it* took that object complement NP as its antecedent. However, there is an impeding principle, namely Principle II. According to Principle II, the best that we could ever hope to find is a sentence with grammaticality of ?, and then we would be able to find these only in cases of morphological relationship like *liquefy*; we would not expect to find cases like this with *kill*, since by Principle II such cases would always be ungrammatical. Moreover, there is something of a problem in detecting sentences with the grammaticality

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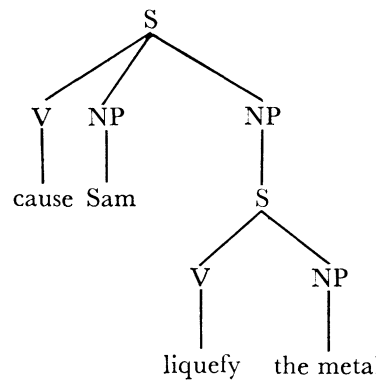
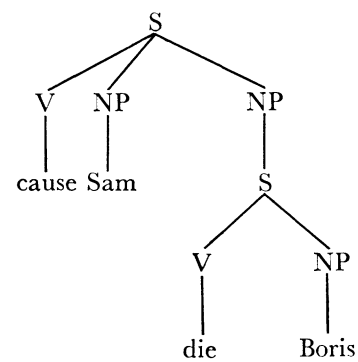
(iii) a. *Iroquoianists are strange: they think it should be made into a world language.
b. ?*Violinists are strange: they don't seem to mind its yowling.
c. ?Australians are strange: they don't seem to find it too remote.

The fact that anaphoric island constraints should interact with low-level phonetic features is not too surprising, given Ross's demonstration that anaphoric island constraints are to be stated as output conditions on the antecedents of pronouns which actually occur in surface structure (cf. Ross 1971): often surface structure constraints are formulated in phonetic terms.

(7′)



(8′)



of ? in such cases. The problem is that an *it* may take as antecedent either a full sentence or an embedded sentence. For example, the following sentence is ambiguous:

(9) Although I know you won't believe it, Bill said that Harry robbed a bank.

In (9), *it* may refer to *Bill said that Harry robbed the bank* or just *Harry robbed the bank*. The antecedent of *it* may be either the embedded S or the top S. If, however, the reading where *it* takes the embedded S as antecedent is of decreased grammaticality, while the other reading is fully grammatical, then the sentence is understood as being unambiguous, with the fully grammatical reading being chosen. Thus (10) is unambiguous:

(10) I know you won't believe it, but Sam liquefied the metal.

Here *it* is understood as referring only to the topmost S, since that is the only fully grammatical reading possible. Thus, if we are to detect a reading of grammaticality ?, we

must find a context which factors out the fully grammatical reading. Such a context was proposed in Lakoff (1970).

(11) ?Max finally liquefied the metal, but it would have taken Sam a year to bring *it* about.

In (11), the italicized *it* is understood as referring to the object complement in (7′), that is, it is understood as meaning *bring it about that the metal liquefy*. Note that, as predicted by Principle II, we cannot find such a sentence with *kill*.

(12) *Max finally killed Boris, but it would have taken Sam a year to bring *it* about.

For most speakers, the underlined *it* in (12) cannot mean *bring about Boris's death*. The existence of cases like (11) supports the causative analysis given above. The lack of similar support in cases like *kill* is predicted by Principle II, and thus cannot be taken as a counterargument to the causative analysis, contrary to Fodor's claim (cf. Fodor 1970).

References

Fodor, J. A. (1970) "Three Reasons for Not Deriving 'Kill' from 'Cause to Die'," *Linguistic Inquiry* 1, 429–438.

Lakoff, G. (1970) *Irregularity in Syntax*, Holt, Rinehart, and Winston, New York, N.Y.

McCawley, J. D. (1968) "Lexical Insertion in a Transformational Grammar Without a Deep Structure," in *Papers from the Fourth Regional Meeting of the Chicago Linguistic Society*, Binnick, Davison, Green, Morgan, eds., Linguistics Department offset, University of Chicago, Chicago, Illinois.

Postal, P. M. (1969) "Anaphoric Islands," in *Papers from the Fifth Regional Meeting of the Chicago Linguistic Society*, Binnick, Davison, Green, Morgan, eds., Linguistics Department offset, University of Chicago, Chicago, Illinois.

Ross, J. R. (1971) "The Superficial Nature of Anaphoric Island Constraints," *Linguistic Inquiry* 2, 599–600.

GH-WORDS

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The segment written *gh* appears to be an anomaly in English orthography. In most cases it has evidently no reflex in the word as spoken. *Taught* sounds as if it should be spelled *taut* or *tot*. When the segment does have a consonantal reflex, the sound is one which is most commonly represented with a different symbol. It would seem more natural to spell *draught* as *draft* and *ghastly* as *gastly*. However, there are a few arguments against doing away with *gh*—arguments