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Inner Islands

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Many syntactic processes or structures, if your theory doesn't view syntax as an event, as I will continue to, are interfered with by negation, either asserted or presupposed. Here's a frinstance:

- (1) a. This mist can't last, which Morpho and Hoppy (don't) realize.
b. This mist can't last, as Morpho and Hoppy (*don't) realize.

Very puzzling, on the face of it, for it is apparent that the main clause of (1) is in some sense the deep object of realize in both cases, which seem anyway to be very close in meaning. Why should negatives be fine in which-clauses, but be excluded in as-clauses?

I have been musing about this niggardliness of negatives, this syntactic party-pooping that they do, for a long time now, and in this paper, I am going to retrace some of my footsteps, so that you will not have to reexplore some of the dead ends that I have gone into. I will not take the limited space available in this paper to document the fact that the general problem that I am dealing with here is not a problem of English alone. Try these starred sentences out in your favorite other languages and like as not, you will find highly similar restrictions over there too. Only similar, though - rarely identical. Sigh - the Comparative Syntactician's work is never done.

A word on the terminology: islands are what I called in my thesis (cf. now Ross (in press [believe it or not])) the maximal areas in which syntactic processes of a designated sort could apply. Basically, the island of a node in a tree is a chain of clauses extending upward from that node, each clause being a complement of the predicate in the next clause up. That's a bit too tight, also too loose, but it will do for now. I will also leave skirted the question as to how these islands are to be defined - syntactically, semantically, or pragmatically, or by some mix of all three.

I intend the notion of inner to be understood as follows: some processes (like the one forming as-clauses) have an even smaller domain of application than the theory of islands would predict. These processes, which I call inner rules, are inapplicable just in case the relevant island contains a negative element. Thus negatives shrink the size of what would otherwise be the available space of an island: inner rules are restricted to the domain of these inner islands.

OK, you may say, so far so acceptable, but now on with the show! Some rules are inner, some not - disclose to us which are

259

which, O Learned One! I too thought in these terms for many a year, until I recently realized that while some rules are always inner (the rule for as-clauses, for example), there are others which are only sometimes inner. Question Formation is one.

- (2) a. What did no imitation pearls touch?
b. *What did no imitation pearls cost?

So for some rules, we will have to specify which application are, and which are not, sensitive to the influence of negation. By the way, it seems unlikely to me that we can get away with saying that *(2b) is out because of some semantic peccadillo. It is in fact evident that poor old *(2b) is straining every nerve to mean something, namely something like (3):

- (3) There were lots of different prices for the imitation pearls. Were there some items at all prices, or were there some prices that were not being charged for any imitation pearl?

Unfortunately for *(2b), (most?) people just can't mean (3) with *(2b)'s troops. And in general, I am pretty skeptical about any attempt to do away with all syntactic parameters in inner island violations in favor of semantic ones. *(4a) looks like a good candidate for such a dodge, but *(4b) might perfectly well mean something along the lines of (3).

- (4) a. *How long didn't the concert last?
b. *How long did few concerts last?

Let us return now to the problem of explaining the difference between the superficially similar sentences in (2). Obviously, semantics won't help us here. For if (2a) can have a paraphrase like (5),

- (5) There were some things not touched by any imitation pearls - which things?

why can't *(2b) have a paraphrase like (6)?

- (6) There were some prices not assigned to any imitation pearls - which prices?

My current hypothesis is that the relevant notion here is that of adverbiality. For the similarity between (2a) and *(2b) is only apparent: in (2a), the typical case, the what corresponds to an underlying NP which is semantically a direct object (maybe a goal?). In *(2b), however, the what corresponds to a measure phrase (MP), the kind of constituent that modifies the adjectives in (7).

- (7) a. This nice sturdy one is 15 centimeters long.
b. That whiskey is 73 years old.

As can be seen from some of the sample ungrammaticalities in (8), MP's are more restricted than NP's: many types of combinations that would fly for the latter crash for the former.

- (8) a. *This one is those/some/my/both centimeters long.
b. *That whiskey is the years that it lay in the vat old.

Furthermore, it is clear that semantically, the MP's in (7) and those that follow the verbs of (9)

- (9) a. This ruler cost seven/*those dollars.
b. The pasta weighed 100lb/*[sm] tons.
c. The tarpon measured 60 meters/*the meters that we had estimated.

has some semantic role similar to that played by adverbs of degree.

In short, (2) makes the same point that is made in (10). In (10a), the rule of Cleft Formation has extracted an NP, so the adverbiality factor is not present. In (10b), however, an instrumental adverb has been clefted, and we see that this rule too has applications that are inner.

- (10) a. It was this stiletto that they (never) stabbed the lasagna with.
b. It was with this stiletto that they (*never) stabbed the lasagna.



I will from now on assume that two points have been made: (1) it is not rules per se but rather applications of them that are inner[we have thus far seen this only for Question Formation and Cleft Formation, but there are others]; and (2) the adverbiality of the affected constituent plays a role in the innerness of the application of the rule. Armed with this latter observation, we may see a possible approach to the mystery of the contrast in (1), with which I opened the paper.

First of all, the innerness of as-clauses may be connected to the fact that historically, as is a reduced form of an adverb, namely also. Further, there are uses of as in current English in which it clearly functions as some sort of manner adverb relative pronoun:

- (11) I'll approach their kinkiness as they approached mine.

Of course, neither of these facts is much more than suggestive of what the correct story might be for the as in such sentent-

ial clauses as those in (1b), but there is another piece of evidence that has more weight, I think. The which-clause of (1a) is a non-restrictive clause, in apposition to a sentence. Like all other such clauses, it can only follow the clause it is modifying; it cannot be "nicked" between the constituents of the modified clause. Thus the impossibility of *(12), in which such a nicking has been performed,

- (12) *This mist, which Morpho and Hoppy (don't) realize, can't last.

parallels the badness of *(13b):

- (13) a. That this mist can't last, which Morpho and Hoppy (don't) realize, is self-evident.
b. *That this mist, which Morpho and Hoppy (don't) realize, can't last is self-evident.

However, the as-clause of (1b) is under no such limitations. Sentential as-clauses can appear initially, or can be nicked anywhere into the clauses that they modify, as long as major constituents are not interrupted. I indicate these possibilities by the carets placed under (14) - a caret containing an asterisk indicate a bad place for nicking.

- (14) ^ This mist can't last, as Morpho and Hoppy (*don't) reali-
 ^ * ^ ^

In other words, as-clauses have roughly the same nichabilities as any other sentence adverb would. My hunch is that it may be in this adverbial behavior of the entire clause that the innerness of the rule that forms sentential as-clauses lies. At present, it is opaque to me in the extreme as to what kind of adverbial function the as can have within the realize clause of (1b). I feel that the eventual solution must connect with the existence of such sentences as those in (15), which were pointed out to me by Jerry Morgan.

- (15) a. Selznick thinks that grapes are sentient, but I think different.
b. Barrington feels that the Jets could outbunt the A's, and I feel that way/so too.
c. They feel that the set may be bumper-recursive. How do you feel?

The underlined words are all connected with manner adverbs in one way or tother, but none of them work with realize, so the dream of making as an adverbial relative pronoun, and explaining the innerness of sentential as-clauses on that basis must remain distant for a while longer, I fear. However, that's the best line I've got on the problem at present.

Let me now turn to an investigation of what kinds of adverbs seem to interact with negatives interferingly. There are two basic kinds of adverbs, as far as I have been able to discover: a set which never seems to form inner islands, and a set which sometimes does, and sometimes doesn't, with the deciding factors still obscure to me. Adverbs of the first type are listed in (16), with an example of each.

(16) Adverbs that don't care a hoot how negative you are

- a. Directionals: Into which jugs didn't he pour any gravy?
- b. Locatives: It is upstairs that we don't have vampires.
- c. Temporals: It was yesterday that I didn't go to work.
- d. Conditionals: It is only if Ronnie wins again that I am not remaining on the planet.
Under what circumstances don't we wrap their ankles?
- e. Durational: It was for seven years that she did not return.
For how many months have you not been taking cnidoblastian extract of falafel?
- f. Comitatives: It is with Boris that I don't work well.

Now for the types of adverbs that sometimes seem to cause innerness. For each type, I will cite one ungrammatical, and one grammatical, example. If you can figure out what's going on here, please let me know.

(17) Adverbs that sometimes seem to care

- a. Manner:
 - i. How did(*n't) you find a solution?
 - ii. How did(n't) he fulfill the requirements?
- b. Degree:
 - i. To what extent did you (*never) help out?
 - ii. To what extent do(n't) you understand the proof?
- c. Instrument
 - i. It was with this hoe that they (*didn't) put the diamonds into the thickshakes.
 - ii. It is with these rivets that eggshells should never be repaired.
- d. Frequency:
 - i. ?It was six times that he didn't talk to me.
 - ii. How many times did(n't) they show up?

One final type of adverb - benefactives - seems to always produce bad sentences with negation. I at least have not been able to make up any good sentences.

- (18) Benefactives: For whom did(*n't) you enter the race?
*It was for my dog that I didn't change jobs.

This partitioning of the set of adverbs makes no sense to me. It correlates with nothing else that I know of. I report it here simply in the hope that someone else will be able to get a handle on it.

I also regret to have to qualify the claim of (16a) and (16b) that directionals and locatives never figure in the creation of inner islands. For there is one rule (or possibly two?) that preposes certain adverbial PP's, and this rule seems to be inner in all its applications. Two cases, one directional, one locative appear in (19).

- (19) a. Down the road Sanford thinks/*doubts we/*nobody will zoom
b. Near the bandstand Jeff/*no students thought/*denied that he had seen an ocelot.

Needless to say, this is an enigma within a riddle.



Having discussed the interaction of adverbial type and innerness, I would now like to list the rules that I have found to be inner, or to have inner applications. There is precious little structure to this list, except that I start off with an attempt to use adverbiality to the hilt. Accordingly, I will begin with a bunch of cases of relative clauses, or things like them, that modify adverbial nouns (of the correct kind), nouns like degree, extent, manner, way, amount, and so on.

(20) Relative clausoids on adverbial nouns

- a. The extent to which they (*won't) mess it up is staggering
- b. Sam will describe the way in which we (*won't) solve the
- c. The (amount of) headway that I will/*won't make on my tating will satisfy the magistrate.
- d. She greeted me with the (amount of) warmth that they (*won't) expect.
- e.
 - i. He is half the doctor that his mother was(*n't).
(=he is a doctor to half the extent to which his mother was(*n't))
 - ii. She is as brilliant as her sister was.
(=the extent to which she is brilliant equals the extent to which her sister was brilliant)
 - iii. Her brother is more voracious than my teen-ager is
(=the extent to which her brother is voracious exceeds the extent to which my teen-ager is)

A few comments are in order. In (20c) and (20d), I am suggesting remote structures containing amount to head the subordinate clauses. This will account for the synonymy of the versions with and without this noun, and in addition will provide a basis for explaining the innerness violations. Similarly, in the three construction types in (20e), even though the paraphrases with extent involve more structural changes than merely deletion, I feel that there is sufficient motivation to render derivations from the parenthesized versions attractive (Cf. Postal (1971) for details)

(21) Three more preposing rules, pretty adverb-looking

- a. The lumpier they (*never) made the porridge, the happier (*few) students were.
- b. The longest Sheldon (*seldom) had to wait was two decades. The thinnest that I could(*n't) get her to slice it was two millimicrons. The tersest I will/*won't be able to word it is two lines.
- c. I (don't) think that (few) students realize that Cheerios are fattening. \implies (via Slifting)
Cheerios are fattening, I (*don't) think that (*few) students realize.

These three rules seem somehow connected to adverbial notions. The first asserts that one extent/amount covaries with another, and some such lowering analysis as Postal suggests for cases like (20eii-iii) can be worked out in this case too. I totally give up on such superlative cases as those in (21b), whose remote structures have been a conundrum to me for two decades. However, superlatives do involve degree modification, and degree adverbs are of the right kind.... In the third case, I don't know how to make a superordinate clause turn into a sentence adverb, but part of the process seems to involve the raising and preposing of complement clauses of verbs like think, realize, and so on. I have no real idea as to why innerness is involved.

I turn now to even worse cases. In (22), there are two constructions that are similar to relative clauses in following a noun or pronoun-like head, but this explains nothing.

- (22) a. The tubas for us (*not) to play are on the chest.
b. All these samples (*don't) have to do is contain ytterbium and we're saved.

I note in passing that not all all-constructions are inner: note the grammatical cases in (23).

- (23) a. All we didn't look at was the balance sheets.
b. All we didn't prove was that the set is recursively imaginable.
c. All I couldn't do was finish the bookshelves.

The only all-constructions that seem to involve innerness contain some modal like must or have to and a stative verb. Curiouser and curiouser.

The final batch of cases looks simultaneously non-adverbial and non-relative-clausoid.

(24) Hand-thrower-uppers

- a. Object Deletion with predicates like ready, fit, convenient, etc. (though not with too or in Tough- constructions (Why??))

- The papers are ready for you (*not) to put relish on. Jovelowkes is too gluttonous (not) to invite. Michael Jackson is tough (not) to worry about.
- b. Object preposing?/deletion? after verbs like have, etc. I selected Ted Kennedy (*not) to throw mud at.
- c. Respectively cases: Tony (never) flew to Ankara, and Geoff (never) flew to Bridgeport. $\times \rightarrow$
Tony and Geoff (*never) flew to Ankara and Bridgeport, respectively.
- d. Gapping cases: Sheila kept on/*from stuffing lions, and Fred tigers.

All in all, a pretty tatterdemalion set of cases. I feel that I am at least as far from understanding why a particular (part of a) process is inner as I am from understanding why the set of adverbs is partitioned as it is. Quite possibly, the answers are not unrelated.



I could go on and on here, but I will draw this preliminary report to a close. The conclusions that I have arrived at so far in my investigations are summed up in (25).

- (25) a. Basically, inner islands are never formed when a rule affects the central grammatical relations of a clause. An exception is any case in which the affected element contains an adverb. Thus we can say What house can't you photograph? (the affected element is a direct object), but not *How big a house can't you photograph?
- b. Only adverbials of a certain (mystery-shrouded) type seem to induce inner islands.
- c. As far as I know, inner islands constrain only rules which make essential use of variables. That is, all local rules, like the term-changing rules of Relational Grammar, seem not to care how negative the elements they affect are.

That's as far as I've been able to see thus far. Good luck to anyone foolish enough to press on with this research!

Bibliography

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