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Optional labeling and its effect on structural distance

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## Optional labeling and its effect on structural distance

Brooke Larson\*

**Abstract.** Subjects and objects famously show robust asymmetries in their patterning, so much so that those patterns are taken to indicate fundamental geometrical differences in their positions in the derivations of syntactic structures. However, there are clear cases where subjects and objects fail to show this otherwise normative asymmetry. Following work done in Longenbaugh & Polinsky (2018), I propose an analysis of those instances of surprising symmetry that makes them predictable. I argue that terms merge for Case or EPP reasons, the resulting structure need not undergo any labeling. Instances where this lack of labeling fails to intervene between two terms renders them structurally equidistant for further operations and thus provides the venue for symmetry between subjects and objects.

**Keywords.** endocentricity; structural distance; CI-interface; labeling

**1. Introduction.** I've learned many things from Masha, but one that I most cherish is the importance of coordination; not in the *and* and *or* sense, but rather of being able to simultaneously balance considerations of often competing concerns. The coordination of theory and data I take as nearly a given (though she is of course the consummate pro here), but Masha's true genius lies in the coordination of those along with broader field-level intuitions, savvy institutional know-how, and genuine interpersonal warmth. These latter considerations fall under the purview of what is often called "real world" concerns. But I think Masha exemplifies how in the true "real world", all of the above are interwoven, or at least it's richer and more interesting when they are.

My affiliation information indicates that I spend my time nowadays in that so-called "real world", and though I'm less adept than Masha at coordinating efforts there with the realm of theory and data, I hope my offering here is taken as honoring her well-rounded and admirable spirit and talent.

One reason that syntax is fascinating and worth studying in and of itself lies in how it deviates from the narrowly construed "real world". Certain aspects of syntax that should be obviously true turn out to be false, and things that are counterintuitive, invisible, and seemingly magical are not only true, but true in ways that lead to deeper understanding and compounding discovery.

Words follow words, one after another in a single-dimensional file, but a major and beautiful discovery is that so much more can be explained about the nature of language via recourse to extradimensional geometries than by sticking with the obvious, observable one. There are a variety of ways these ghostly dimensions are discerned, but in this paper, I focus here on just two: endocentricity and structural distance.

Endocentricity is a scientific word for invisible influence that a single word has over other words around it. In the sentence *the black cats quickly ate the cake*, it seems that the word *eat* somehow extends its shadow over the words around it, putting up silent brackets in either direction *the black cats [quickly ate the cake]*, because in many ways the string *quickly ate the cake* behaves in some ways just like verb *ate* would alone.

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\* Japanese judgments are thanks to Masaya Yoshida, Finnish thanks to Antti Antola, and Spanish thanks to Bryan Cisneros. Author: Brooke Larson, Rime Labs ([brooke@rime.ai](mailto:brooke@rime.ai)).

Structural distance is another dry term that is used to refer to something a little eerie. Not only can a word, like *what*, show up in places apart from where it is interpreted, it seems that the number of intervening words doesn't matter. Rather, it is some factor that our senses cannot casually observe that makes (1) sound unremarkable and (2) sound bad.

- (1) What did the two sneaky little black cats eat?  
 (2) \*What did you know why they ate?

In this article, I argue that we can explain some interesting phenomena and maybe learn something about the nature of language if we explore endocentricity being a little more violable than normal, and that that violability can in turn interact with structural distance in novel ways. The jumping off point, for me, comes from work that Masha was involved in a few years ago, as I recapitulate in the next section.

**2. Background.** In “Equidistance Returns” (Longenbaugh & Polinsky 2018), a number of puzzling facts about the Polynesian language Niuean are presented. The main source of the initial puzzlement comes from the fact that internal and external syntactic objects seem to be equally valid targets of various operations, not evincing the normal sort of asymmetries that we see between those same types of arguments in other languages.

For instance, in English only subjects can raise:

- (3) a. John<sub>i</sub> seems [t<sub>1</sub> to have written a great book]  
 b. \*[A great book]<sub>i</sub> seems [John to have written t<sub>1</sub>]

Yet in Niuean (examples from Seiter 1980), both the subject and object of the embedded clause can raise.<sup>1</sup>

- (4) a. to     maeke     [e     ekekafo]<sub>i</sub>   [ke     lagomatai t<sub>1</sub>     a     sione]  
       FUT   possible   ABS   doctor     SBJ   help                ABS   Sione  
       ‘The doctor can help Sione.’  
 b. to     maeke     [a     sione]<sub>i</sub>   [ke     lagomatai he     ekekafo t<sub>1</sub>]  
       FUT   possible   ABS   Sione     SBJ   help         ERG   doctor  
       ‘The doctor can help Sione.’

Another case of asymmetries holding in English but not Niuean comes from superiority effects. In English, you can't move an object *wh*-word over a subject *wh*-word (shown here in (5)), but in Niuean it seems that you can (shown, from Longenbaugh & Polinsky 2018, in (6)):

- (5) a. who<sub>i</sub> t<sub>1</sub> saw what?  
 b. \*what<sub>i</sub> did who see t<sub>1</sub>?  
 (6) a. ko     hai     ne     kai     e     heigoa?  
       PRED   who   NFT   eat     ABS   what  
       ‘Who ate what?’  
 b. ko     e     heigoa ne     kai     e     hai?  
       PRED   ABS   what   NFT   eat     ERG   who  
       ‘What did who eat?’

<sup>1</sup> For these and the other data from Niuean, please refer to Longenbaugh & Polinsky for a fuller and more convincing set of arguments in favor of the assessments I present here. For example, the same pattern can be found in raising to object position: English can only raise the subject, Niuean can raise either the subject or the object.

Though an important wrinkle to these superiority effects indicates that it's not simply the case that Niuean has *no* restrictions on the relative movement of *wh*-words. In fact, there are quite severe and familiar restrictions on them when the *wh*-words are not in the same clause or when the *wh*-words are not subjects and objects respectively. Oblique *wh*-words, for instance, can't move over subjects (7) and object *wh*-words of lower clauses can't move over *wh*-words of higher clauses (8) (examples again from Longenbaugh & Polinsky 2018):

- (7) \*ko fe ne fano a hai ki ai?  
 PRED where NFT go ABS who to there  
 'Where did who go?'
- (8) \*ko e heigoa<sub>1</sub> ne pehe a hai [ne kaihaa e koe t<sub>1</sub>]  
 PRED ABS what NFT say ABS who PST steal ERG you  
 'What did who say that you stole?'

In short, there is the potential for superiority effects in Niuean, it's not simply immune to them. Rather, superiority holds generally except between subjects and objects of the same clause. These and other data and arguments from Longenbaugh & Polinsky indicate that, as far as extraction facts are concerned, there is no sense in which Niuean subjects are structurally superior to objects, and vice versa.

Longenbaugh & Polinsky provide a compelling analysis of this puzzle in the form of subjects and objects in Niuean coming to reside in the specifier of the same head at some point in the derivation alongside a specific implementation of Agree, and I urge the reader to explore that work. But in the spirit of both honor and extending the work that Masha has done over her career, for the rest of the paper I offer my own approach to this problem.

**3. This paper's approach.** For the above set of data, we need some explanatory theory of why it is the case that the internal and external arguments of Niuean are treated the same as far as extraction-related facts are concerned. This effectively means that the object must move to a position near the base-generated position of the subject and that the subject must not move from that position. This goal is roughly sketched below:

- (9) [C [T [Sub [Obj<sub>1</sub> [v [V t<sub>1</sub>]]]]]]

The situation above is not new. In Chomsky (1993, 1995) it was noted that some notion of equidistance is needed for subjects and objects. If an object moves over the base position of a subject for Case (10), we need a means to allow the lower subject to move over the derived position of the object, like in (11).

- (10) [vP Obj<sub>1</sub> [vP Sub [VP V t<sub>1</sub>]]]  
 (11) [TP Sub<sub>2</sub> T [vP Obj<sub>1</sub> [vP t<sub>2</sub> [VP V t<sub>1</sub>]]]]

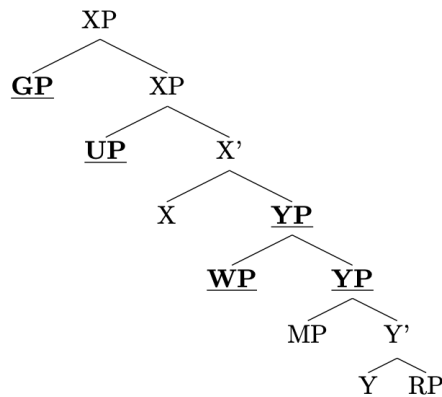
This can be allowed if we stipulate that the subject and the object are no closer or farther from the future landing site of the subject. This stipulation is achieved via Chomsky's (1993) definition of Minimal Domain:

- (12) The Minimal Domain of  $\alpha$ , or  $\text{MinD}(\alpha)$ , is the set of categories immediately contained or immediately dominated by projections of the head  $\alpha$ , excluding projections of  $\alpha$ .

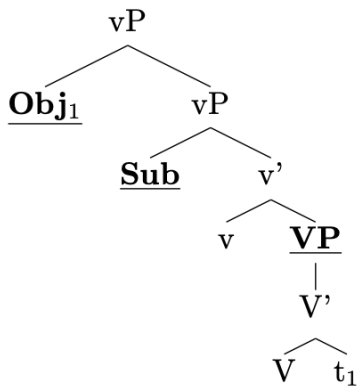
This definition made it such that, for the tree below in (13), all the underlined nodes would be equally far from any other node in the tree. Basically, the minimal domain is a special zone

where structural distance is rendered void of any import. This applies to the relevant situation in (14).

(13)



(14)



This is fiat, so it works technically, but it should raise suspicions on minimalist grounds. The equidistance is just stipulated and doesn't fall out from anything. I propose an update to this view and show that we can get equidistance to emerge from more general things. The first ingredient to this update: labeling.

3.1. WHY DO WE WANT LABELS AND HOW DO WE GET THEM? Language displays endocentricity. That is, it seems like whole phrases act like one of their more prominent members:

(15) Boys like(\*s) apples.

(16) The boys in the park who were playing baseball like(\*s) apples.

Over the years, endocentricity has been captured in a number of ways. In the early days (Chomsky 1957), it was stipulated for each lexical category. Nouns headed noun phrases because that's what seemed to be the case and that's what the rule said, seen in (17). This is more descriptively adequate than anything else. The great leap forward X-bar theory offered was to generalize this stipulation irrespective of lexical category (cribbed from Chomsky 1970 in (18)). Then, with the advent of the minimalist approach and bare phrase structure, the inclusiveness condition ensured that one of the mergees became the label for the root node (Chomsky 1995, ex. (19)).

(17) In 1957, by stipulation for each lexical category:  
 NP → (det) (AdjP) N (PP) ; VP → (AdvP) V (DP)

(18) In 1970, by stipulation for any lexical category:  
 $XP \rightarrow (YP) X' ; X' \rightarrow X (ZP)$

(19) In 1995, as an obligatory result of Merge and the Inclusiveness Condition:  
 $\text{Merge}(X,Y) \rightarrow {}_x[X Y] \text{ or } {}_y[X Y]$

But Chomsky (2013) and later work suggests that we should derive endocentricity from an operation other than Merge. That is, Merge results in an unlabeled object, and a separate operation of Label was required to capture the facts of endocentricity.<sup>2</sup>

(20)  $\text{Merge}(X,Y) \rightarrow [X Y]$

(21)  $\text{Label}([X Y],X) \rightarrow {}_x[X Y]$

In this work, Chomsky states that every structure created by Merge must at some point be labeled so as to be interpretable at the CI-interface. That is, endocentricity is strictly enforced, but only because failure to label will render that structure illicit at the CI interface.

(22) Chomsky (2013: 43)

For a syntactic object SO to be interpreted, some information is necessary about it: what kind of object is it? Labeling is the process of providing that information.

I propose a different lens on this requirement. Chomsky assumes that every result of Merge needs to be CI interface-licit, and as such, endocentricity is enforced for every result of Merge. In short, everything must be labeled eventually.

I, on the other hand, suggest that there are instances where a given Merge results in a structure that does not need to be interpreted at the CI interface. As such, only those structures that must be interpreted at the CI-interface must be labeled. If labeling fails to apply to a result of Merge that must be CI-interpreted, that will cause the result to be ungrammatical. Crucially, there are a few instances where Merge is spurred for syntax-internal, meaning independent, reasons: Case and the EPP.<sup>3</sup>

Essentially, if an instance of Merge is motivated by Case or the EPP, the resulting structure can fail to label and not run afoul of any CI-interface conditions. Say that X merges with Y in (23a) for Case reasons alone, the result need not label, but the resulting label-less structure can in turn be the input to subsequent Merge operations like in (23b) and explored in Chomsky (2013).

(23) a.  $\text{Merge}(X,Y) \rightarrow [X Y]$   
b.  $\text{Merge}([X Y],Z) \rightarrow [Z [X Y]]$

This possibility has repercussions for notions of structural distance, as I explore in the next subsection.<sup>4</sup>

3.2. HOW DOES LABELING RELATE TO EQUIDISTANCE? Chomsky (2013) also discusses how minimal search works. Say we have an object like (24) below. According to minimal search, X is

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<sup>2</sup> The idea that the result of Merge may sometimes be label-less finds precursors in Collins (2002), Citko (2008), and others.

<sup>3</sup> Now, Case and the EPP have long been targeted for elimination from explanatorily adequate theories of syntax. But to my estimation, those efforts have yet to succeed and, for better or worse, we get to (or have to) still make recourse to them, these strictly syntax-internal notions.

<sup>4</sup> A potentially interesting prediction is thus made. Structures resulting from an instance of Merge whose only motivation is Case or the EPP should not be manipulable by the grammar. For example, they shouldn't be moveable or deletable.

closer/easier to find than anything in ZP (though X and ZP themselves are equally accessible). In other words, when two terms are separated by a label (one is within a labeled object and the other outside of it), the two cannot be treated equally by the syntax as in (25).

(24) [X ZP]

(25) [X<sub>z</sub>[Z Y]] *X and Y are unequal, X “more available” than Y*

When two terms are not separated by a label, they must be treated equally by the syntax, all else being equal. In (26), sure, there are brackets between the terms, but brackets are not terms, not themselves manipulable by the grammar, and as such, they are invisible to syntactic operations.

(26) [X [Z Y]] *X and Y are equally available to syntactic operations*

As we can see, the presence or absence of a label can determine whether two terms are more or less structurally distant from some other position.

In sum, Chomsky (2013) has it that labeling happens for interpretive purposes. I propose that if the result of Merge need not be interpreted (say for Case or EPP reasons), it need not label. If we follow Chomsky (2013) and say that syntactic distance is measured in Labels, we have the basic ingredients to explain equidistance. In the next section, I show how this can explain the Niuean facts.

3.3. AN ANALYSIS OF NIUEAN. In this section, I go through a derivation of a simple Niuean sentence to show how the above principles might function. Take a sentence like that below (modified slightly from Massam 2001):

(27) ne kai e Sione e tau talo  
 PST eat ERG Sione ABS PL taro  
 ‘Sione ate the taros.’

Let’s derive it. Ignoring a number of irrelevant factors, first the verb head merges with the object (28). Chomsky isn’t entirely clear on the relation between labeling and CI-interpretation, so I propose an approach in the case of an object merging with its selecting verb: the result must label so that the object can achieve a thematic interpretation.

(28) Merge(V,Obj) → [V Obj]

(29) <sub>v</sub>[V Obj]

Then, little *v* is merged with that resultant structure. The result must label so that aspectual information can be related to main verb (following Borer 1998).

(30) Merge(<sub>v</sub>,<sub>v</sub>[V Obj]) → [<sub>v</sub> <sub>v</sub>[V Obj]]

(31) <sub>v</sub>[<sub>v</sub> <sub>v</sub>[V Obj]]

In the next step, the object moves to Spec,<sub>v</sub>P for absolutive Case. It moves before the subject Merges following a Move-over-Merge syntax (Larson 2015). Because the movement was solely for the case, a syntax internal notion with no CI-information, the result need not label.

(32) Merge(Obj,<sub>v</sub>[<sub>v</sub> <sub>v</sub>[V Obj]]) → [Obj <sub>v</sub>[<sub>v</sub> <sub>v</sub>[V Obj]]]

Next, merge in the subject, as in (33).

(33) Merge(Sub,[Obj <sub>v</sub>[<sub>v</sub> <sub>v</sub>[V Obj]]]) → [Sub [Obj <sub>v</sub>[<sub>v</sub> <sub>v</sub>[V Obj]]]]

Here's where it gets interesting. The result of the above Merge is repeated below in (34). The subject gets its thematic role from the little *v*. This is possible since neither the object nor the little *v* label are closer to the subject than one another. Similarly, since the verbal complex with the thematic role assigned to the subject must be interpreted at the CI-interface, the little *v* labels the result (35).

(34) [Sub [Obj <sub>v</sub>[<sub>v</sub> <sub>v</sub>[V Obj]]]]

(35) <sub>v</sub>[Sub [Obj <sub>v</sub>[<sub>v</sub> <sub>v</sub>[V Obj]]]]

When the T merges, it too must label so as to relate the tense information to the rest of the predicate. We can assume that it assigns Case to the as-yet-caseless subject.

(36) <sub>T</sub>[T <sub>v</sub>[Sub [Obj <sub>v</sub>[<sub>v</sub> <sub>v</sub>[V Obj]]]]]]

The VP moves for EPP reasons (Massam 2000). The result does not label since the EPP is irrelevant to meaning.

(37) [VP <sub>T</sub>[T <sub>v</sub>[Sub [Obj <sub>v</sub>[<sub>v</sub> <sub>v</sub>[V Obj]]]]]]]]

This is precisely where English and Niuean differ. In English, the EPP feature on T is aimed at DPs. The subject DP still needs Case and can get it by agreeing with T and moving to satisfy its EPP demand. This is shown in (38) below and explains why English doesn't evince the same equidistance phenomena as Niuean. Subjects and objects in English are separated by at least two labels. This is also why other languages with similar sorts of object shift do not show the same characteristics as Niuean: their subjects must vacate to the T-domain, breaking the temporary equidistance.

(38) English subject raising: [Sub <sub>T</sub>[T <sub>v</sub>[Sub [Obj <sub>v</sub>[<sub>v</sub> <sub>v</sub>[V Obj]]]]]]]]

Back to Niuean, the C-head is merged and labels to contribute illocutionary force. The result is that the subject and object have no intervening labeled projection. They are thus equally subject to syntactic relations from above. And as such, any operation that works over nominals can equally access the subject and object.

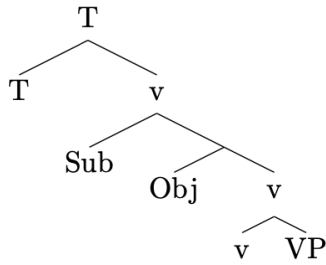
(39) <sub>C</sub>[C [VP <sub>T</sub>[T <sub>v</sub>[Sub [Obj <sub>v</sub>[<sub>v</sub> <sub>v</sub>[V Obj]]]]]]]]]]

We can thus capture the lack of subject-object asymmetries in Niuean based on a couple of factors. 1) The object moves to the *v*P domain for Case (or EPP) reasons but doesn't induce labeling that would render it structurally farther than the subject introduced above it. 2) There is no DP-oriented EPP on T, so the subject can stay low, next to the subject. 3) Both the object and the subject are otherwise satisfied in their *v*P-internal positions, so the effects of their equidistance are not erased, like in English.

3.4. WHAT ABOUT C-COMMAND? In Niuean situations like below, does the subject c-command the object? We have a structure that looks like this:



(40)



As the classical definition has it, A c-commands B iff: 1) A does not dominate B and B does not dominate A and 2) every branching node that dominates A also dominates B. If “branching node” can be divorced from Label, then the subject asymmetrically c-commands the object here. This is good, because it seems that we want to maintain this sort of asymmetry between subjects and objects in Niuean.

With respect to Principle A of binding theory, subject and object appear to be asymmetric. Subject pronouns cannot bear the reflexive marker *ni* in coreference with the object, but the inverse pattern is acceptable.

- (41) a. \*kua kitia e ia ni a sione  
PERF see ERG 3SG REFL ABS Sione  
'Sione saw himself.'
- b. kua kitia e sione a ia ni.  
PERF see ERG Sione ABS 3SG REFL  
'Sione saw himself.'

We can and must maintain the idea that the subject asymmetrically c-commands the object, but that they are equidistant. This demands that structural distance be interpreted in a certain way. In the past, there have been various ways of measuring syntactic distance. In Chomsky (1977), for instance, this was determined by the notion Subjacency, where certain dominating nodes were counted to determine distance (42). More recently, Relativized Minimality has been widely adopted, where asymmetric c-command plays a crucial role (43).

(42) Chomsky (1977)

A cyclic rule cannot move a phrase from position Y to position X (or conversely) in ...X... [ $\alpha$ ... [ $\beta$ ...  $\gamma$ ... ]... ]... Y..., where  $\alpha$  and  $\beta$  are cyclic nodes. Cyclic nodes are S and NP

(43) Rizzi (1990) (paraphrased)

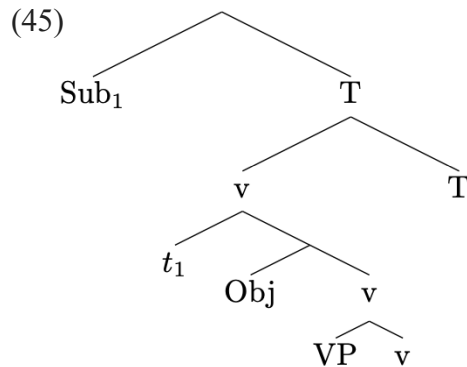
Y can move to X iff there is no Z such that 1) Z is typically the sort of thing that can move to X and 2) Z c-commands Y, but it does not c-command X

Clearly, we cannot maintain this second means of distance measuring for the analysis here. Instead, structural distance should be measured by recourse to intervening labels, much like in the Subjacency era. A revised understanding of structural distance without recourse to c-command is proposed in (44). In short, it is possible to maintain the utility of c-command for geometric relations between terms, while at the same time divorcing it from definitions of structural distance.

- (44) A new Subjacency era:  
 Y can syntactically relate to X iff there is no Z such that 1) Z is typically the sort of thing that can syntactically relate to X and 2) there are fewer labeled nodes between Z and X than between Y and X.

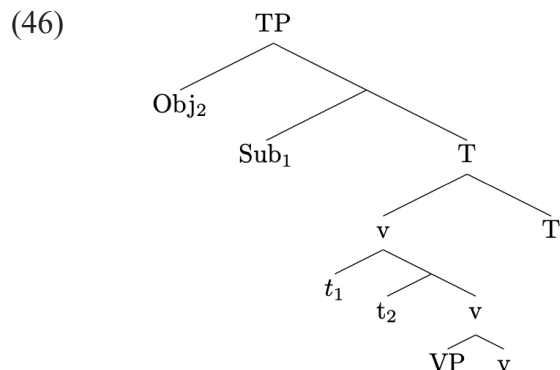
**4. Additional structural configurations.** We've seen that a certain number of ingredients go into the subject-object symmetry in Niuean. One ingredient is that one argument comes to reside within the same projection as another without an intervening label (say, motivated by Case or EPP). The other is that both arguments are satisfied there and need not move further, which would erase that equidistance. All else being equal, if these ingredients are found in other languages, they too should lack the same types of asymmetries. In this section, I show how this might work for other similar configurations in other languages.

4.1. EQUIDISTANCE WITHIN THE T-DOMAIN. In Japanese, we're not going to be able to play the exact same game as in Niuean. Japanese moves its external arguments to T for Case/EPP reasons according to Miyagawa (2001, 2003) (though compare Fukui 1986; Kitagawa 1986; Kuroda 1988) as shown below.



However, just like with movement of the object to little *v* in Niuean, movement of the subject to T does not result in labeling, since it was for meaning-less, syntax-internal reasons. If something else moves to the T-domain, it will be equidistant to that subject. One such instance of this is Scrambling.

Japanese allows clause-internal, A-scrambling to such a position, like below in (46). In this position, both subject and object are equidistant for further operations. And we in fact do see evidence for this. For example, when it comes to *wh*-superiority effects Nishigauchi (1990) shows that scrambled *wh*-objects evade superiority violations (47).



- (47) a. dare-ga nani-o tabeta no?  
 who-NOM what-ACC ate Q  
 ‘Who ate what?’  
 b. nani-o dare-ga tabeta no?  
 what-ACC who-NOM ate Q  
 ‘What, who ate?’

Whatever operation links *wh*-words to the C-head does not rule out (47b). But superiority holds otherwise in Japanese. *Wh*-words from lower clauses cannot cross those in higher ones (Takahashi 1993). So we can see equidistance arising exactly in the configuration that we expect.

- (48) \*nani-o<sub>1</sub> john-wa dare-ni [mary-ga t<sub>1</sub> tabeta to] itta no?  
 what-NOM<sub>1</sub> John-TOP who-DAT Mary-NOM t<sub>1</sub> ate COMP said Q  
 (‘What did John tell who that Mary ate?’)

A-scrambling is not the only means for another argument to merge into the T-domain with the subject. Japanese has an operation of possessor raising, which takes possessors of subjects and “raises” them to the same structural plane (from Yatsuhiko 2001). The possessor *John* in (49a) is raised to a position like that of the scrambled object in the previous scenario in (49b).

- (49) a. john-no hahaoya-ga paatii-ni kita.  
 John-GEN mother-NOM party.to came  
 ‘John’s mother came to the party.’  
 b. john-ga hahaoya-ga paatii-ni kita.  
 John-NOM mother-NOM party-to came  
 ‘John is such that mother came to the party.’

Lastly, certain ostensible objects seem to be able to arise in a similar higher position where they also get nominative case, so-called “nominative object” constructions (from Hiraiwa 2001):

- (50) mary-ga eigo-ga/\*wo yoku dekiru.  
 Mary-NOM English-NOM/\*-ACC well do.can.PRES  
 ‘Mary can speak English well.’

Assuming, following Hiraiwa (2001) and others, that the two nominative elements find themselves in the T-domain, they should both equally be subject to further operations. A test of this can be found in Japanese ECM/raising-to-object constructions. In (51a), the embedded subject can raise to the matrix clause from its embedded T position (51b).

- (51) a. yamada-wa TP[tanaka-ga tensai da] to omotteita.  
 Yamada-TOP Tanaka-NOM genius COP COMP thought  
 ‘Yamada considered Tanaka to be a genius.’  
 b. yamada-wa tanaka-o<sub>1</sub> TP[t<sub>1</sub> tensai da] to omotteita  
 Yamada-TOP Tanaka-ACC<sub>1</sub> genius COP COMP thought  
 ‘Yamada considered Tanaka to be a genius.’

As seen below, the equidistant arguments from above equally play this role. Given possessor raising of *Mary* in the lower clause, both the possessor and the possessee are equidistant and as such can both be raised to object. The first two examples are from Hiraiwa (2001), showing that the raised possessor can itself raise to object, but (52c) is new and crucial. It shows that *Mary-ga* is no closer than *me-ga* in (52a).

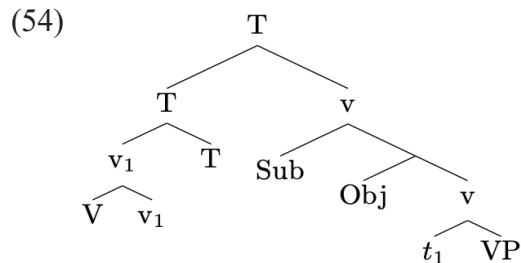
- (52) a. john-ga [mary-ga me-ga waru-i] to omoikondeita.  
 John-NOM Mary-NOM eyes-NOM bad-PRES C thought  
 ‘John thinks that Mary has a bad eyesight.’  
 b. john-ga mary-wo<sub>1</sub> [t<sub>1</sub> me-ga waru-i] to omoikondeita.  
 John-NOM Mary-ACC<sub>1</sub> eyes-NOM bad-PRES C thought  
 c. john-ga me-wo<sub>1</sub> [mary-ga t<sub>1</sub> waru-i] to omoikondeita.  
 John-NOM eyes-ACC<sub>1</sub> Mary-NOM bad-PRES C thought

The same holds for the “nominative object” construction from above. Crucially, even the “lower” nominative argument can enter into a raising relationship, as predicted if they are both within T.

- (53) a. john-ga [mary-ga eigo-ga yoku dekiru] to omoikondeita.  
 John-NOM Mary-NOM English-NOM well do.can.PRES C thought  
 ‘John believed that Mary can speak English well.’  
 b. john-ga mary-wo<sub>1</sub> [t<sub>1</sub> eigo-ga yoku dekiru] to omoikondeita.  
 John-NOM Mary-ACC<sub>1</sub> English-NOM well do.can.PRES C thought  
 c. john-ga eigo-wo<sub>1</sub> [mary-wo t<sub>1</sub> yoku dekiru] to omoikondeita.  
 John-NOM English-ACC<sub>1</sub> Mary-NOM well do.can.PRES C thought

The upshot is that in Niuean, we found equidistance stemming from certain derived configurations within the vP; In Japanese, we can find it with that same configuration within the TP.

4.2. EQUIDISTANCE CREATED BY AN EPP SEEKING A VERB HEAD. Another instance where we can look to find argument-parity comes from Spanish. In Spanish VSO constructions, there is an EPP feature on T, but it does not attract DPs or VPs, but rather V(erb) heads (Alexiadou & Anagnostopoulou 1998). This means that there are derivations where the subject and object remain equidistant, like in (54).



As such, all else being equal, we should expect Spanish to work similarly to Niuean. There is more work to be done here, but when it comes to *wh*-superiority, we find effects similar to Niuean. Ordóñez (1998: 53, citing Jaeggli 1982), shows this here:

- (55) a. quién compro que?  
 who bought what  
 b. que compro quién?  
 what bought who

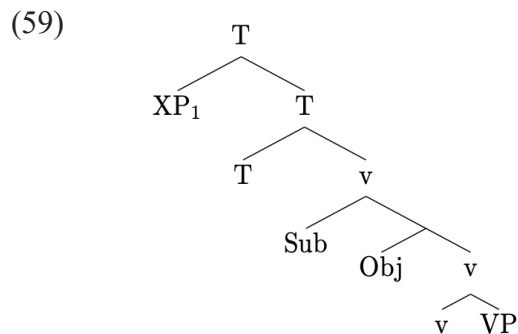
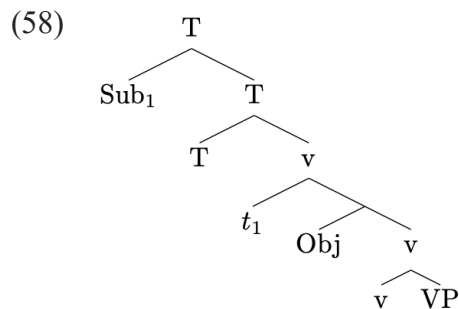
And also like Niuean (and Japanese), superiority is not always void. It appears when the a *wh*-word from a lower clause crosses a *wh*-word in a higher clause, as in (56)

- (56) a. *quién dijo que Juan compro qué?*  
 who said that Juan bought what?  
 ‘Who said that Juan bought what?’  
 b. \**qué dijo quién que Juan compro?*  
 what said who that Juan bought

4.3. EQUIDISTANCE CREATED BY AN EPP SATISFIED BY AN EXPLETIVE. The literature on parametric variation in the EPP is vast, and given the theory proposed here, we should find it effecting or destroying equidistance in various ways. A notable case can be seen in Finnish, which has been argued to have an EPP feature on T that attracts any XP (Holmberg & Nikanne 2002):

- (57) a. *lapsia leikkii kadulla.*  
 children play street.in  
 ‘Children are playing in the street.’  
 b. *kadulla leikkii lapsia.*  
 street.in play children  
 c. *sitä leikkii lapsia kadulla.*  
 EXP play children street.in  
 d. \**leikkii lapsia kadulla.*  
 play children street.in

Here we have a nice test. In situations like (57a), where the subject satisfies the EPP requirement, there should be subject-object asymmetry; when something else does, like the adjunct in (57b) or the expletive in (57c), we shouldn’t. That is, when the subject satisfies the EPP Finnish should work like English (58), when something else does, it should work like Niuean (59):



We can effectively toggle on and off whether there has been subject EPP movement or not and this should correlate with the presence or absence of subject-object parity. When a subject *wh*-word raises to T for EPP (like in (58) above), an object *wh*-word cannot cross over it:

- (60) \*Mikä kuka on nähnyt?  
 what.ACC who.NOM is seen  
*Intended:* ‘What has who seen?’

However, if we substitute an expletive in that EPP position (like in (59) above), the same *wh*-configuration is licit:

- (61) Mikä sitä on nähnyt kuka?  
 what.ACC EXP is seen who.NOM  
 ‘What has who seen?’

Moreover, if that EPP position was filled by the object *wh*-word, the inverse order is OK too, indicating that both the subject and the object could move to the T-domain, due to their equidistance in the *v* domain. The upshot being that the particular presence or absence of an EPP feature determines *wh*-superiority in Finnish.

- (62) Mikä on nähnyt kuka?  
 what.ACC is seen who.NOM  
 ‘What has who seen?’

Like in the Spanish case, there is more work to be done here, but the prediction is clear, the ability for subjects and objects to land next to each other, driven by Case or the EPP and remain there, should imply that they can be treated as equidistant.

**5. Conclusion.** Endocentricity is a fundamental characteristic of language, and though we take it as indispensable, it is indeed a strange notion and should not be assumed to be ubiquitously essential and inviolate. If we take seriously the notion that the role of labeling is not syntax-internal, but rather used for the purpose of CI-interface intelligibility, then we are left with a heretofore unexplored possibility: structures that need not (or cannot) be interpreted need not (or cannot) label. And because labeling is effectively just our modern parlance for endocentricity, we find ourselves in fact denying the obligatoriness of endocentricity, at least for a select few cases. These few cases seem to be when structure is built for Case or EPP reasons, odd instances of their own and themselves fodder for speculation.

Distance in language is counterintuitively *not* measured in words. But there are still multiple ways it could be measured. It is widely adopted today that it is measured indirectly in a sort of geometry defined by *c*-command. But here we find instances where *c*-command holds between two terms but fails to render one less accessible than the other. If we use the presence or lack of labels (in effect the presence or lack of endocentricity) instead to determine distance as pertains to language, a new picture emerges: one where *c*-command matters less and endocentricity, though more nuanced in its application, matters more.

This work is clearly programmatic and there is much unaccounted for here. But as it stands, this theory tightly clusters certain properties: the notions of Case, EPP, interpretation, and endocentricity, perhaps indicating a future avenue of theorizing.

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