A Distinctness Condition on Linearization[*]

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A number of phenomena in different languages seem to be constrained by a ban on multiple objects of the same type that are too close together. In this paper I will attempt to develop a general theory of bans of this type, which will involve (among other things) the relevant formal definitions of "same type" and "too close together". The result will be a theory of syntactic phenomena not unlike those handled by the OCP in phonology[1]. We will see that some of the facts that have traditionally been handled by Case theory can be made to follow from more general conditions on syntax.

English quotative inversion offers a relevant example. In quotative inversion, a quote appears at the beginning of the sentence, and the subject is postverbal:

(1)   "It's cold," said John.

In such examples, the verb may be followed by material other than the subject:

(2)   "It's cold," said John to Mary.

However, the postverbal material may not consist of multiple DPs:

(3)   *"It's cold," told John Mary.

Quotative inversion, then, is constrained by a ban on multiple DPs in the postverbal domain.

To handle these facts, and others like them, I will propose a new well-formedness condition on the linearization statements used by Kayne's (1994) LCA. The new restriction on ordering statements will have the effect of making multiple syntactic nodes of the same kind
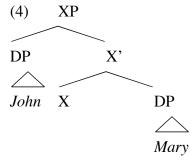
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[*] Many thanks to...
[1] For other work on a "syntactic OCP", see Hoekstra (1984), Mohanan (1994b), Yip (1998), Anttila and Fong (2001), and references cited there.

impossible to linearize if they are close together in the structure, in a sense to be made precise.

Such unlinearizable structures are therefore banned, and are avoided in a number of ways, as we

will see.

I will assume, with Chomsky (1995, 2000, 2001) that the trees generated by the syntax do

not contain information about linear order, and that linearizing the nodes of the tree is one of the

tasks performed by the operation of Spell-Out. I will assume that linearization is accomplished

via Kayne's (1994) LCA. Spell-Out considers the set **A** of pairs of asymmetrically c-

commanding XPs and X^os in the tree which the syntax gives it, and generates from this a set of

instructions for linearization; if $<\alpha, \beta>$ is in A, then the *image* of α (that is, the terminals

dominated by α) is ordered with respect to the image of β.

I will also assume, again following Chomsky (2000, 2001), that Spell-Out can occur

several times in the course of a syntactic derivation; in particular, that it occurs as soon as a

strong phase has been constructed. Strong phases will include CP, transitive vP, PP, and KP.

Spell-Out sends the material in a strong phase to PF, making all of it inaccessible to further

syntactic operations, apart from its edge; following Chomsky (2000, 2001), the edge will be the

material in the highest specifier and head positions of the phase. I will crucially assume,

following Nissenbaum (2000), that the edge is linearized with the material in the higher phase.

My new proposal will have to do with the content of linearization statements. Consider

the linearization of a tree like the one in (4):

(4)   XP

DP   X'

John   X   DP

                Mary

The two DPs in this tree are in an asymmetric c-command relation, and can therefore, following Kayne, be related by a linearization statement. What form should this statement take? In the tree in (4), the two nodes in question are both labelled "DP"; we might therefore take the relevant linearization statement to be <DP, DP>. Of course, this ordered pair does not look very helpful for linearization; depending on how these statements are interpreted, it seems to say that a DP precedes itself, or perhaps that one DP precedes the other (without specifying which comes first). We could avoid this result by assigning the two DPs indices, or allowing the linearization statement to refer to the contents of the two DPs (<DP (*John*), DP (*Mary*)>), or to their positions (<DP in specifier of XP, DP complement of X>), more or less as we would when informally referring to nodes on the tree.

I want to suggest, however, that these richer ways of referring to positions in the tree are not in fact available to the linearization process. The linearization statement associated with a tree like (4) is indeed <DP, DP>. Such statements are uninterpretable, perhaps because the linearization algorithm regards them as self-contradictory instructions to make DPs precede themselves. As a result, any tree that generates linearization statements of this kind cannot be linearized, and the derivation for such a tree crashes at Spell-out. The upshot of this is that when a subtree is spelled out, if any pair of nodes in that tree cannot be distinguished from each other and are in an asymmetric c-command relation, the derivation crashes.

Which nodes cannot be distinguished from each other? For English and several other languages, it will turn out to be nearly sufficient to say that nodes cannot be distinguished from each other if they have the same label. The tree in (4), for example, is an unacceptable candidate for Spell-out in English, since the two DPs in it cannot be distinguished from each other, and one c-commands the other.

We will see in section 3, however, that this is not the whole story. This is welcome news, since it is not clear that node labels ever have the importance attributed to them above (for one argument that they never do, see Collins 2002). In fact, as we will see, languages vary in how distinct they can make DPs; for some languages, all DPs are the same, while for others, DPs are the same only if they have identical values for case, grammatical gender, and/or animacy.

Apparently, then, the nodes of a tree are identified by features associated with them; in some languages, like English, the DP node is associated only with a feature that it shares with all other DPs (perhaps [+D]) while in some other languages, a DP node also has phi-features that can differentiate it from other DP nodes. For most of what follows we will concentrate on languages of the English type, so I will continue to write as though the nodes are identified by their labels, but it is worth bearing in mind that this is not strictly true.

The new condition on linearization is given in (5):

(5)   Distinctness

If a linearization statement <α, α> is generated, the derivation crashes.

This condition rejects trees in which two nodes that are both of type α are to be linearized in the same phase, and are in an asymmetric c-command relation (so that a linearization statement relating them is generated).

The proposal given here makes use of Kayne's (1994) idea that we can get some conditions on syntactic trees to follow from the need to render those strings as linearly ordered strings of words. The paper will not need to adopt all of the particulars of Kayne's (1994) proposal, however. For example, Kayne's idea that the specifier of XP is not fully dominated by XP will play no role in the account; similarly, I will remain agnostic about whether a

linearization statement <α, β> is invariably interpreted as "α precedes β", allowing for the possibility of a head direction parameter.

The paper will proceed as follows. In section 1, we will review a number of cases of Distinctness. Section 2 will argue that the relevant condition should be a condition on linearization; I will discuss more fully the mechanics of linearization, and we will see that Distinctness effects arise just when two nodes of the same type are linearized in the same phase. In section 3, we will consider the set of types for nodes to which linearization statements may refer; we will see that these types vary from language to language. Section 4 will outline some of the ways in which Distinctness violations are circumvented, including the removal of offending structure, addition of structure that insulates the potentially offending nodes from each other by adding a phase boundary between them, the suppression of movement operations that would otherwise create Distinctness violations, and the triggering of movement operations that separate potentially offending nodes. Section 5 will consider the extent to which classic Case theory may be replaced by the theory developed here. Section 6 will conclude the paper.

1.   Distinctness violations

In this section we will consider a number of instances in which linearization fails because the objects to be linearized in a single phase are insufficiently distinct. These cases are simply intended to illustrate the general idea; the exact structures in these examples are often unclear, and are largely irrelevant for our purposes. We will begin looking at more clearly understood examples in section 2.

1.1 English quotative inversion; French stylistic inversion

Let us consider how Distinctness would capture the facts in (1-3), repeated here in (6):

(6)   a. "It's cold," said John.

        b. "It's cold," said John to Mary.

        c. *"It's cold," told John Mary.

Here the subject is in some post-verbal position, and the verb has apparently raised past it. The

Distinctness account of the facts does not depend very heavily on any particular structure for

these sentences, as long as all the post-verbal material is in the same phase. In (6c), for example,

this phase might consist of the tree in (7)[2]:

(7)   *v*P
         ╱   ╲
      DP   *v*'
      ╱╲   ╱   ╲
   John *v*   VP
                    ╱   ╲
                 DP   V'
                 ╱╲   ╱   ╲
             Mary V   ...

The tree in (7) is unlinearizable. Its linearization statements will include those in (8):

(8)   <DP, *v*>, <DP, VP>, **<DP, DP>**, <DP, V>, <*v*, DP>, <DP, V>...

The boldfaced linearization statement represents the relation between the DP *John* and the DP

Mary. By hypothesis, the information that one of these DP nodes dominates *John* and the other

dominates *Mary* is unavailable to the linearization process; as a result, the linearization statement

is self-contradictory, and will cause the derivation to crash.

As we will continue to see below, the presence of an offending linearization statement is

always enough to make the derivation crash. Crucially, the derivation crashes even if the

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[2] The particular version of Spell-out that we are using, which affects the complement of the phase head, would
actually be expected to spell out the VP rather than the *v*P. The structure of quotative inversion is unclear enough
that I will not try to fix this problem here; either we need some more complex statement of Spell-out, or I have put
the subject in the wrong place in (7).

structure is in fact linearizable without making use of the offending statement. In the particular

case of (7), for example, if we disregard Kayne's suggestion that maximal projections do not

have their specifiers in their images, we might expect to be able to linearize the tree without

making use of the <DP, DP> pair. The higher DP, after all, c-commands VP, and we might be

able to conclude from that that this DP precedes everything in VP, including the lower DP.

Apparently this is not enough to save the structure; the system gives up as soon as an

uninterpretable linearization statement appears.

French has a phenomenon known as Stylistic Inversion (see Kayne 1972, Kayne and

Pollock 1978, Déprez 1988, Valois and Dupuis 1992, and references cited there for discussion),

which is subject to similar conditions. French subjects may be postposed in wh-extraction

contexts:

French (Kayne and Pollock 1978, 595)

(9)   a. Quand   partira   ton ami?

          when   will-leave your friend

     'When will your friend leave?'

        b. Je me demande quand   partira   ton   ami

           I   me   ask   when will-leave your friend

     'I wonder when your friend will leave'

However, Stylistic Inversion is impossible when the verb is transitive and both arguments remain

to the right of the verb:

French (Valois and Dupuis 1992, 327)

(10)   a. *Je me demande quand mangera sa pomme Marie

        I me ask   when will-eat her apple   Marie

'I wonder when Marie will eat her apple'

       b. *Je me demande quand mangera Marie sa pomme

        I me ask   when will-eat Marie her apple

'I wonder when Marie will eat her apple'

In (10b), linearization fails; as in the English quotative inversion case, the linearization process for the post-verbal domain includes a statement <DP, DP>, which will cause the derivation to crash. See Anagnostopoulou and Alexiadou (2001) for insightful discussion of a number of phenomena of this type[3].

1.2 Multiple sluicing, multiple exceptives, *even*

As pointed out by Sauerland (1995) and Moltmann (1995), English exhibits an odd constraint on several types of construction involving multiple ellipsis remnants. Multiple remnants with exceptives, ellipsis with *even*, and sluicing are all in principle possible in English:

(11)   a. Every man danced with every woman, except [John] [with Mary]

       b. Every man danced with every woman, even [John] [with Mary]

       c. I know somebody was dancing with somebody,

              but I don't know [who] [with whom]

Such constructions are impossible in English if the remnants are both DPs:

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[3] Alexiadou and Anagnostopoulou (to appear) offer a number of criticisms of an earlier draft of this paper, one of which is that there are certain languages (they list Greek, Spanish, Romanian, German, and Kilega) in which multiple DPs inside the *v*P are allowed. We will see some ways that languages might be able to permit this kind of configuration (in sections 3.2-3.3, in particular). If none of these explanations turn out to be valid for the languages they discuss, I might be able to adopt a version of their theory, which involves a special status for a certain type of agreement, which effectively allows the grammar to treat the agreeing nominal as *v*P-external even when it is not. Translated into my terms, the proposal would involve saying that certain types of agreement allow the grammar to distinguish the agreed-with DP from other DPs, making linearization statements successful.

(12) a. *Every man admired every woman, except [John] [Mary]

b. *Every man admired every woman, even [John] [Mary]

c. *I know somebody insulted somebody, but I don't know [who] [whom]

If we assume that the ellipsis remnants are both in the same phase (perhaps because a movement operation has moved them both out of the domain of ellipsis), then these facts follow from Distinctness; in (12), the two DPs cannot be linearized.

1.3 Tagalog predication

In Tagalog we find another instance of an apparent ban on structurally adjacent DPs, which can be attributed to Distinctness. Tagalog is a predicate-initial language, which in principle allows any kind of phrase to be a predicate. The examples in (13) show the behavior of VP, AP, PP, and NP predicates, respectively:

(13) a. Umuwi   si Juan

went-home   Juan

'Juan went home'

b. Mataas si Juan

tall   Juan

'Juan is tall'

c. Tungkol sa balarila   ang   libro

about   grammar the   book

'The book is about grammar'

d. Guro si Maria

teacher Maria

'Maria is a teacher'

Tagalog also allows the subject to be fronted by a variety of means. Such fronting apparently involves raising of the subject to a higher position, and is subject to the locality restrictions Tagalog typically imposes on A-bar extractions generally, including wh-movement; in particular, such fronting is essentially limited to subjects (and certain kinds of adjuncts). One type of fronting involves a morpheme *ay* after the fronted subject, which I will not attempt to gloss here:

(14)   a. Kumain si Maria ng bangos

            ate   Maria   milkfish

        'Maria ate milkfish'

        b. Si Maria ay kumain ng bangos

            Maria   ate   milkfish

        c. *Ng bangos ay kumain si Maria

(14a) and (14b) are both grammatical and completely synonymous; native speakers report no difference in meaning at all, though (14b) is felt to be slightly more formal.

        Tagalog also allows DPs to be predicates. However, when a DP is a predicate, fronting of the subject is obligatory[4]:

(15)   a. Si Maria ay ang pangulo

            Maria   the president

        'Maria is the president'

        b. *Ang pangulo si Maria

Again, we can make sense of these facts in terms of Distinctness. (15b) involves two DPs, arguably both in the same phase; apparently this situation must be remedied by moving one of the DPs further away, perhaps into a distinct phase. Similar phenomena can be found in a variety of predicate-initial languages; see Carnie (1995) for discussion of similar facts from Irish.

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[4] In examples like (15a), *ay* can in fact be dropped.

1.4   DP-internal arguments

Within a gerund, the subject and object of the verb on which the gerund is based may optionally be expressed as PPs headed by *of*:

(16)   a. the singing [of the children]

b. the singing [of songs]

However, only one argument may surface in this way:

(17)   *the singing [of the children] [of songs]

The ban on nominalization of verbs with double objects (Kayne 1984, Pesetsky 1995) might follow in a similar way:

(18)   a. the gift [of a book] [to John]

b. *the gift [of John] [of a book]

For the contrast in (18) to follow from Distinctness, there will have to be some relevant difference between PPs headed by *of* and those headed by *to*. One possibility would be to view *of* in these constructions as a pronounced K(ase) head, while *to* is actually a P, so that the prepositional phrases in (18a) are a KP and a PP, respectively.

2.   The mechanics of Distinctness

The account I have sketched of phenomena like those in the previous section is sensitive to syntactic structure in a way that I have not yet shown to be necessary. At this stage, we might wonder whether so much syntactic heavy machinery is really called for to deal with the phenomena under discussion; one might, instead, posit some kind of ban on "stuttering" which penalized linearly adjacent words of the same kind. We might claim, in other words, that the phenomena I have just discussed have nothing to do with syntax.

In this section, I will try to defend the claim that Distinctness effects are crucially sensitive to syntactic structure, and are not about linear adjacency. The syntactic conditions that give rise to Distinctness effects, I will argue, often do result in linear adjacency between the syntactic objects involved, but we will see that adjacency is neither necessary or sufficient for Distinctness effects to arise. In section 2.1, we will show that linear adjacency is insufficient to get Distinctness effects; section 2.2 will be devoted to showing that it is unnecessary.

2.1 Linear adjacency without Distinctness

The case studies in this section will involve phenomena that Distinctness can handle. We will also see, however, that the objects which are regulated by Distinctness are sensitive, not to linear adjacency, but to spell-out domains.

2.1.1 Perception/causative verb passives, doubl-ing, Italian double infinitive filter

A number of phenomena involve bans on sequences of adjacent verbs, which can be treated in terms of Distinctness. We will see that these bans are sensitive to phase boundaries.

Sentences like those in (19) cannot be passivized:

(19)   a. We saw John leave

        b. We let John leave

        c. We made John leave

(20)   a. *John was seen __ leave

        b. *John was let __ leave

        c. *John was made __ leave

We can rule out (20) with Distinctness, assuming a tree for the highest *v*P in these examples something like (21):

(21)

```
              vP
          ┌────┴────┐
          v         VP
              ┌──────┴──────┐
              V             vP
            seen       ┌─────┴─────┐
                       v           VP
                                  ◣
                                leave
```

(21) cannot be linearized; there are two heads *v*, and so there will be a linearization statement of the form <*v*, *v*>, which will make the linearization process crash.

By similar logic, this account deals with an otherwise mysterious gap in English subcategorization; although, as we have seen, there are several transitive verbs that take bare infinitive complements, there seem to be no intransitive verbs that do:

(22) a. John seems __ tired

b. John seems __ a fine fellow
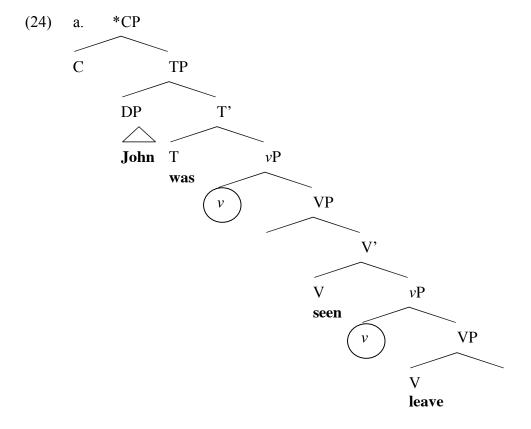
c.*John seems __ enjoy movies

Such verbs would always yield unlinearizable sentences, as in the passive case above; there would be no transitive vP to provide a strong phase boundary to separate the two verbs.

Note that the relevant notion clearly is not simply string-adjacency, since wh-traces, unlike NP-traces, do relevantly intervene between the verbs:

(23) a. [how many prisoners] did you see __ leave?

b. [how many prisoners] did you let __ leave?

c. [how many prisoners] did you make __ leave?
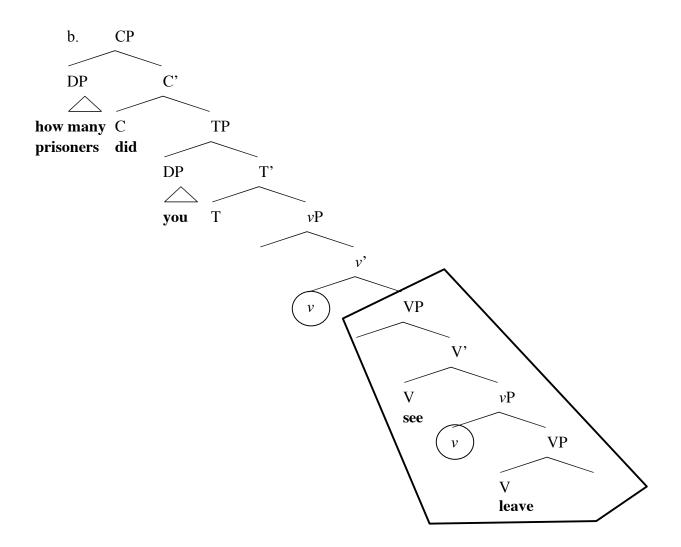
In terms of the theory developed here, this contrast between wh-traces and NP-traces can be made to follow from the distribution of strong phases. The higher verb in the examples in (23) is associated with the apparatus of case-assignment to the wh-moved NP--that is, the vP of the higher clause is transitive, and hence a strong phase, unlike the vP of the higher clause in (20),

which is intransitive. In these examples, the higher of the two instances of v is on the edge of a phase, and is therefore linearized with the higher phase (following Nissenbaum 2000); linearization therefore succeeds[5]. The trees for (20a) and (23a) are given in (24):

(24) a.   *CP

```
          *CP
         /    \
        C      TP
             /    \
           DP      T'
          /\      /   \
        John    T       vP
              was      /   \
                    (v)     VP
                           /   \
                          V'
                        /    \
                       V      vP
                     seen   /    \
                          (v)     VP
                                 /   \
                                V
                              leave
```

b. CP

DP C'

how many C TP
prisoners **did**

DP T'

you T vP

v'

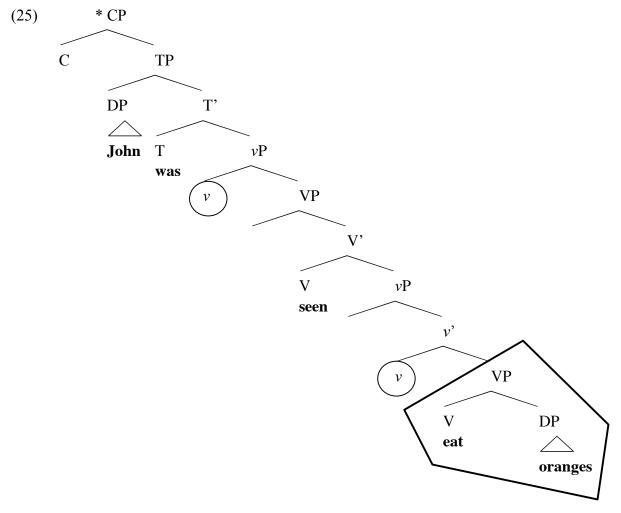v VP

V V'
see

V vP

v VP

V
leave

The relevant difference between the two trees, on this account, is that in (24b) the higher v is transitive, assigning a theta-role to *you* and case to *how many prisoners*. Since this instance of v is transitive, it is a phase, and its sister is spelled out. The spell-out domain is boxed in (24b), a practice I will continue throughout the paper. This particular spell-out domain contains only one instance of v, and is therefore linearizable. In (24a), by contrast, the higher instance of v is intransitive, and hence not a phase; as a result, both instances of v are spelled out in the same domain, and the attempt to linearize that spell-out domain will crash, since one of the linearization statements will be <v, v>.

At least two potential worries are worth addressing at this point. In the well-formed tree in (24b), the boxed spell-out domain contains only one *v*, but it does contain two instances of V. I will have to assume that *see* and *leave* can be distinguished by linearization; a linearization statement <*see*, *leave*> is acceptable. We will see throughout that Distinctness effects seem never to appear when the potentially offending heads are both lexical.

The other potential worry has to do with the status of embedded *v*P. The contrast in (24) has to do with the higher *v*P; when this is intransitive, as in (24a), the result is ill-formed, and when it is transitive, as in (24b), the result is well-formed. What about the lower *v*P?

In fact, we do not expect the lower *v*P to affect the grammaticality of this type of example, given our assumptions about how Spell-out operates. If we are correct in taking the domain of spell-out to be the sister of the phase head, then the transitivity of the lower *v*P should make no difference. The examples in (24) both involve an intransitive lower *v*P, but suppose we consider a version of (24a) with a transitive lower *v*P:

(25)　　　　* CP

C　　　　　TP

　　　　DP　　　　　T'

　　　　△
　　　John　T　　　　　*v*P
　　　　　was
　　　　　　　　　　(*v*)　　　　VP

　　　　　　　　　　　　　　　V'

　　　　　　　　　　　　　V　　　　　*v*P
　　　　　　　　　　　　seen
　　　　　　　　　　　　　　　　v'

　　　　　　　　　　　　　　(*v*)　　　VP

　　　　　　　　　　　　　　　　V　　　　DP
　　　　　　　　　　　　　　　eat　　　△
　　　　　　　　　　　　　　　　　　　oranges

Even if the lower *v* is transitive, the example is correctly ruled out; if the lower *v*P is a phase, the only result is that the lower VP is spelled out, and the two instances of *v* are still in the same spell-out domain. Only the transitivity of the higher *v* should matter.

English has another phenomenon very reminiscent of the one discussed above, originally discovered by Ross (1972). Ross notes that (26d) is ill-formed, which is surprising in light of the well-formedness of (26a-c):

(26)　　a.　It continued to rain

　　　　b.　It continued raining

　　　　c.　It's continuing to rain

　　　　d.　*It's continuing raining

Ross proposes a "Double -*ing* Filter"; adjacent verbs with the ending -*ing* are banned. The relevant configuration can apparently be broken up by traces of A'-movement, though not by traces of A-movement (or, to put the facts in terms of the theory under development here, the higher *v* can be shielded from the lower *v* by a phase boundary, just when the higher *v* is transitive). (26d) above shows that A-movement traces cannot relevantly intervene, while (27) shows that wh-traces can:

(27)   the children [that I was watching __ playing]

One obvious question that arises is what makes verbs with -*ing* sensitive to the constraint. There is one other phenomenon which seems to group verbs with -*ing* together to the exclusion of others, suggesting that they may have a morphological feature which is being subjected to Distinctness in these cases. Warner (1986) notes that under certain circumstances, a verb can elide even when the "model" verb is not morphologically identical (see also Hagstrom 1994, Lasnik 1999 for discussion):

(28)   a. John has slept, and now Mary will ~~sleep~~

         b. John ate some cheese, and now Mary will ~~eat some cheese~~

In (28), we see that a bare verb can elide using a past participle or a past tense verb as its model. When the model has the -*ing* suffix, however, this kind of ellipsis is impossible:

(29)   *John was eating some cheese, and now Mary will ~~eat some cheese~~

Thus, verbs suffixed with -*ing* seem to be different from all other verbs with respect to this phenomenon, as well, which might lend some comfort to a hypothesis that the head -*ing* is syntactically different in some relevant way from other functional heads.

Finally, Longobardi (1980) discusses a phenomenon in Italian which shares many of the properties of the English facts discussed above. Under certain circumstances, he notes, sequences of infinitives are unacceptable in Italian:

(30)   *Paolo potrebbe sembrare __ dormire   tranquillamente

        Paolo could   seem-INF   sleep-INF quietly

In (30), the verbs *sembrare* and *dormire* are in the same phase. The vP associated with *sembrare* is not a case-assigning one, and hence does not create a strong phase boundary. As in the English case discussed above, a trace of A'-movement can block the relation between the two verbs:

(31)   Ecco l'uomo [che puoi   vedere __ portare ogni giorno dei   fiori   a Mario]

        here's the-man that you-can see-INF   take-INF every day   some flowers to Mario

Again, we can capture this fact in terms of phase boundaries. *vedere* 'see-INF' in (31) is associated with a transitive vP, which checks Case on the relative operator. This strong phase protects the two instances of *v* from each other.

The double-infinitive filter is certainly not universal; it is not found in French or Spanish, for instance:

(32)   a. Paul pourrait sembler   dormir   calmement   [*French*]

           Paul could   seem-INF sleep-INF calmly

        b. Pablo pudo parecer   dormir   tranquilamente   [*Spanish*]

           Pablo could seem-INF sleep-INF quietly

In this connection, it may be relevant that Italian infinitives are structurally high (Pollock (1989), Belletti (1990), Cinque (1999)). Some of the languages that lack a double-infinitive filter also have comparatively low infinitives (this is true of French, for example). Distinctness would

make this a natural correlation; infinitives which remain low in the structure do not raise to the edge of the phase defined by the lower clause, and thus need not be linearized in the same phase as the verb of the higher clause. Whether the distinction between high and low infinitives is sufficient to predict whether a language will have a double-infinitive filter or not is unclear, however. Cinque (1999) describes Spanish infinitives as being relevantly like Italian ones in terms of verb height, but Spanish lacks a double-infinitive filter. More work is clearly in order.

These three phenomena--the English ban on passives of verbs taking bare infinitive complements, the English doubl-*ing* filter, and Italian's double infinitive filter--clearly ought to be accounted for within the same theory. They share a number of intriguing properties, particularly sensitivity to phase boundaries (previously described as sensitivity to the presence of case-marked traces). In the account developed here, all of these phenomena are instances of the effects of Distinctness; the functional heads associated with the verbs cannot be linearized if they are both in the same spell-out domain, since they have the same label.

2.1.2 Differential object marking

Chaha, Spanish, Hindi, and Miskitu all have a case particle with an intriguing distribution. I will argue that the particle appears to distinguish DPs which would otherwise all have to be linearized in the same phase. We will see, again, that phase boundaries are crucial, and that string-adjacency is not relevant.

Chaha (a Semitic language of Ethiopia) exhibits a form of object shift, obligatorily moving specific objects to a position which is higher than non-specific ones[6]:

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[6] Many thanks to Degif Petros, the source of all the Chaha data.

(33) a. C'amʷɨt   nɨmam   <u>ambɨr</u>   tɨčəkɨr

      C'.   normally cabbage cooks

    'C'amʷɨt normally cooks cabbage'

    b.*C'amʷɨt <u>ambɨr</u>   nɨmam   tɨčəkɨr

      C'.   cabbage normally   cooks

(34) a. *C'amʷɨt   nɨmam   <u>ambɨr xʷɨta</u> tɨčəkʷɨnn

      C'.   normally cabbage the   cooks

    b. C'amʷɨt <u>ambɨr   xʷɨta</u> nɨmam   tɨčəkʷɨnn

      C'.   cabbage the normally   cooks

    'C'am ʷɨt normally cooks the cabbage'

When an SOV sentence contains two animate DPs[7] and the object is specific, the object is

obligatorily marked with a prefix *yə*:

(35)   a. Gɨyə yə-fərəz nəkʷəsənɨm

       dog **yə** horse bit

     'A dog bit a (specific) horse'

     b. Gɨyə fərəz nəkəsəm

        dog horse bit

     'A dog bit a (non-specific) horse'

     We can analyze these facts in terms of Distinctness. The account will involve making

some guesses about Chaha's (rather sketchily explored) syntax, which I will try to be as explicit

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[7] See section 4.1.1 below for discussion of why animacy plays a role in these examples.

about as possible. The general idea will be that *yə-* appears to distinguish between DPs which are too close together to linearize.
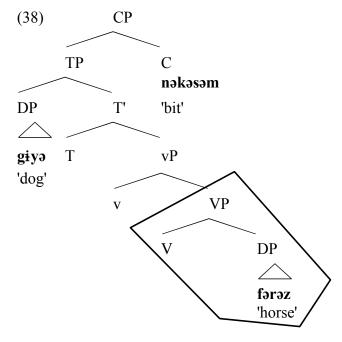
Let us suppose, first of all, that the subject always raises to Spec TP, and that object shift involves overt movement to a specifier of vP (that is, to the edge of vP). There is some reason to think that the verb always c-commands the subject; negation on the verb licenses NPIs in both subject and object position, for instance:

(36) a.   Namaga attɨkar   ansɨyə

              Namaga anything NEG-bought

              'Namaga didn't buy anything'

      b. * Namaga attɨkar   sɨyəm

              Namaga anything bought

(37) a.   attɨsəβ bɨk'ʷrə ansɨyə

              anyone mule NEG-bought

              'Anyone didn't buy a mule'

      b. * attɨsəβ bɨk'ʷrə sɨyəm
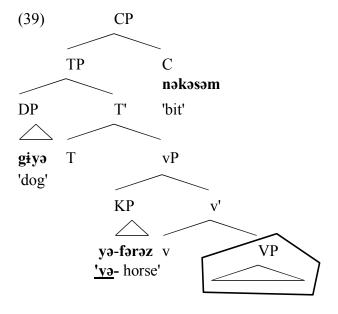
              anyone mule bought

Thus, I will depict the verb as having raised to a C which takes its complement on the left; I will leave aside the problem of how to reconcile this with the LCA, having no way at the moment to choose among the various technical options available.

Let us consider, first of all, the example in (35b), in which object shift has not taken place:

(38)

```
              CP
          ╱        ╲
        TP           C
     ╱      ╲      nəkəsəm
   DP        T'    'bit'
   △      ╱    ╲
 gɨyə   T        vP
 'dog'       ╱      ╲
            v        VP
                  ╱      ╲
                 V        DP
                          △
                        fərəz
                        'horse'
```

(38) is linearizable. The only repeated types of nodes are the two DPs, and these are spelled out in different phases; the *v*P phase spells out the domain which is boxed in the tree in (38), which contains only one of the two DPs.

Next consider (35a), where object shift to Spec vP has taken place. Here the object must be marked with *yə-*, which I will analyze as heading a KP dominating DP:

(39)

```
              CP
          ╱        ╲
        TP           C
     ╱      ╲      nəkəsəm
   DP        T'    'bit'
   △      ╱    ╲
 gɨyə   T        vP
 'dog'       ╱      ╲
            KP       v'
            △     ╱    ╲
        yə-fərəz  v      VP
        'yə- horse'
```

Because the object has undergone object shift, it has moved to the edge of the strong phase vP and is therefore linearized with the higher phase. I propose that (39) obeys Distinctness only because of the KP dominating the lower DP. Let us assume that KP is a phase. As a result, the DP dominated by this KP is spelled out in the KP phase, and is therefore safely linearized by the time the higher DP is introduced[8].

Additional evidence for the approach to *yə-* developed here comes from the behavior of sentences with more than two arguments. Here the indirect object must always be marked with *yə-*, regardless of specificity:

(40)   C'am^wɨt yə-at mɨs fɨraŋk awəčnɨm

C'am^wɨt **yə** one man money gave

'C'am^wɨt gave money to a (specific or non-specific) man'

Thus, *yə-* is not simply a marker for specific direct objects. These facts follow naturally from the account. In (40), there is no way to avoid having the indirect object in the same phase with another DP; if it shifts it is in the higher phase with the subject, and if it does not it is in the lower phase with the object. *yə-* is therefore obligatory, regardless of specificity; informally, it acts as a 'spacer', which appears whenever DPs are too close together. As we should expect on this account, sentences with multiple internal arguments marked with *yə-* are impossible:

---

[8] If DP is the complement of K, then we must assume that linearization is able to distinguish between a spelled-out DP and an un-spelled-out DP.

(41)   a. C'am^{w}ɨt yə-tkə   x^{w}ɨta gɨyə awəčnɨm

C'am^{w}ɨt **yə** child the   dog   gave

'C'am^{w}ɨt gave the child a/the dog'

b. *C'am^{w}ɨt yə-tkə   x^{w}ɨta yə-gyə awəčnɨm

C'am^{w}ɨt **yə** child the   **yə** dog   gave

The distribution of Chaha *yə* has parallels in a number of other languages. Hindi, Spanish, and Miskitu are all like Chaha in having a morphological marker which appears on specific animate direct objects[9] and all indirect objects. In Hindi the marker is *-ko*, in Spanish it is *a*, and in Miskitu it is *-ra* (Hindi from Mohanan (1994, 79, 80, 85), Spanish from Torrego (1998, 21, 40), Miskitu from Ken Hale, personal communication):

---

[9] In Hindi, the marker can apparently also appear in inanimate objects, as long as they are definite (while the crucial property for inanimates is specificity; Mohanan (1994, 79-80)).

(42)   a.   Ravii (ek) gaay kʰariidnaa caahtaa hai

                  Ravi   one cow to-buy   wish   AUX

                  'Ravi wishes to buy a (non-specific) cow'

        b.   Ravii ek   gaay-ko kʰariidnaa caahtaa hai

                  Ravi one cow ***KO*** to-buy   wish   AUX

                  'Ravi wishes to buy a (specific) cow'

        c.   Ilaa-ne   ek haar *(-ko) ųtʰaayaa

                  Ila   ERG one necklace ***KO*** lifted

                  'Ila lifted a necklace'

        d.   Ilaa-ne   mãã   -ko baccaa diyaa

                  Ila   ERG mother ***KO*** child   gave

                  'Ila gave a/the child to the mother'

(43) a.   Laura escondió un prisionero durante dos años

          Laura hid   a   prisoner   for   two years

          'Laura hid a (non-specific) prisoner for two years'

     b.   Laura escondió a un prisionero durante dos años

          Laura hid   *A*   a   prisoner   for   two years

          'Laura hid a (specific) prisoner for two years'

     c.   Golpeó (*a) la mesa

          he/she-hit *A*   the table

          'He/she hit the table'

     d.   Describieron   un maestro de Zen al   papa

          they-described a   master   of Zen *A*-the pope

          'They described a Zen master to the pope'

(44) a.   Yang aaras (kum) atkri

          I   horse   a   bought

          'I bought a horse'

     b.   Yang aaras-ra   atkri

          I   horse *RA* bought

          'I bought a/the (specific) horse'

     c.   Yang tuktan ai yaptika-ra   brihbalri

           I   child   his mother *RA* brought

          'I brought the child to his mother'

Also as in Chaha, these markers cannot normally appear on multiple DPs in a sentence; in

ditransitive sentences, the marker must appear on the indirect object and cannot appear on the

direct object (Hindi from Mohanan (1994, 85), Spanish from Torrego (1998, 133-4), Miskitu from Ken Hale, personal communication)

(45)   a. ilaa-ne   mãã   -ko baccaa diyaa

Ila   ERG mother *KO* child   gave

'Ila gave a/the child to the mother'

b. *ilaa-ne   mãã   -ko bacce-ko diyaa

Ila ERG mother *KO* child *KO* gave

(46)   a. Describieron   un maestro de Zen al   papa

they-described a   master   of Zen *A*-the pope

'They described a Zen master to the pope'

b. *Describieron   a un maestro de Zen al   papa

they-described *A* a   master   of Zen *A*-the pope

(47)   a.   Yang tuktan ai yaptika-ra   brihbalri

I   child his mother *RA* brought

'I brought the child to his mother'

b.   *Yang tuktan -ra   ai yaptika-ra brihbalri

I   child   *RA* his mother *RA* brought

Torrego attributes to Strozer (1976) the discovery that there is in fact a class of verbs in Spanish that allow both objects of ditransitives to be marked with *a*, somewhat marginally (Torrego (1998, 134)):

(48)   ?Mostré/   presenté   al   alumno al   profesor

I-showed/I-introduced *A*-the student *A*-the teacher

'I showed/introduced the student to the teacher'

Torrego offers arguments that the direct objects of such verbs are structurally higher than those of verbs like the one in (48). She suggests a general "exclusion of structures that have [two DPs marked with *a*] in the same Case-checking domain" (Torrego 1998, 134), which is certainly compatible with the approach developed here; if the direct object in (48) can raise out of its strong phase into the strong phase occupied by the subject, then it and the indirect object can be linearized separately[10].

Let us extend the account of Chaha *yə* to Hindi *ko*, Spanish *a*, and Miskitu *–ra* (although the latter languages have word order which is freer than Chaha's in ways which make it difficult to show that the same kinds of movements of DPs are at stake). Thus, in this section, we have seen a nominal counterpart to the cases of bans on adjacent verbs in the previous section; in terms of the theory developed here, multiple DPs cannot be linearized if they are in the same strong phase.

2.2 Distinctness without linear adjacency

In the previous sections we discussed cases which showed that linear adjacency was not sufficient to trigger Distinctness effects; in cases where a strong phase boundary intervened between the two potentially offending objects, linearization would succeed even if the objects were linearly adjacent. This was the case, for instance, in the Chaha example in (49):

(49)   Gɨyə [$_{vP}$ fərəz] nəkəsəm

          dog   horse   bit

       'A dog bit a (non-specific) horse'

In (49), the non-specific direct object need not be marked with *yə-*. In the account developed above, this was because the direct object has not undergone object shift to the edge of the vP

---

[10] Another possibility is that Spanish has, in addition to the *a* which heads a KP, another *a* which is a real preposition.

phase; as a result, it is linearized within the vP phase and the subject is linearized in the higher

CP phase. Because these two DPs are not linearized in the same phase, no Distinctness violation

is incurred. The fact that the two DPs are linearly adjacent is irrelevant. In this section we will

show that linear adjacency is not only not sufficient but also not necessary to trigger Distinctness

effects; syntactic objects that are not linearly adjacent can still exhibit a Distinctness effect.

One of the other things we saw in the last section was that one way of circumventing

Distinctness is to add more functional structure. In languages like Chaha, Hindi, Miskitu, and

Spanish, for instance, one way of circumventing Distinctness violations is to embed one of two

potentially offending DPs in a KP; I hypothesized that this KP is a phase, insulating the DP it

dominates from the subject DP.

Of course, the functional structure that was added in the cases discussed above sometimes

also had the effect of breaking up linear adjacency between potentially offending objects, and

one could imagine theories which made crucial use of this fact. In this section I will try to show

that this would be a mistake. We will see that material which linearly intervenes between two

unlinearizable objects is not sufficient in and of itself to rescue the structure.

2.2.1 Adverbs

Recall from the discussion in section 1.1 above that English and French both have

processes of inversion which exhibit a Distinctness effect; they are blocked from occurring if two

DPs would be left to the right of the verb:

(50)   a.   *"It's cold," told [John] [Mary]

         b.   *Je me demande oú   mange [Marie] [sa pomme]

                      I wonder   where eats   Marie   her apple

These facts are unaffected by the distribution of adverbs (French data from Michel DeGraff, personal communication):

(51) a.   *"It's cold," told [John] **sadly** [Mary]

     b.   *Je me demande oú   mange [Marie] **habituellement** [sa pomme]

           I wonder   where eats   Marie   usually   her apple

This is what we expect. Even if we thought that AdvP was a phase, these adverbs (unlike the KP projections in the differential case marking examples) do not dominate either of the offending DPs. As a result, even if the sister of AdvP turns out to be a spell-out domain, this domain will not protect the two DPs from being linearized in the same phase, and we correctly expect the examples to be ill-formed.

2.2.2 Relativization

Kayne (1977), Chomsky (1977, 1980), Cinque (1981), Pesetsky (1998), and Pesetsky and Torrego (to appear), among many others, discuss a pattern of relativization in various Romance languages and in English infinitival relatives. In these relative clauses, a PP may appear as a relative operator, but not a DP:

(52) a. a person [with whom to dance]

     b. *a person [whom to admire]

     c. a person [to admire]

(53)   a. l'homme [avec qui   j'ai   dansé]   [*French*: Pesetsky 1998, 341]

          the-man   with whom I-have danced

       b. *l'homme [qui   je connais]

           the-man   whom I know

       c. l'homme [que je connais]

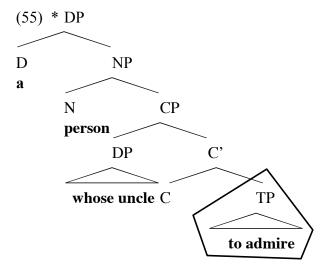   the-man   that I   know

Chomsky's (1977, 1980) classic account of these facts was in terms of "recoverability up to deletion"; on this account, a DP relative operator like the ones in (52b) and (53b) is required to delete because it can be recovered from the context, while PP operators, not being recoverable, are not required to delete.

       Data like those in (54) raise a potential problem for this kind of account:

(54)   a. *a person [whose uncle to admire]

       b. *l'homme [la femme de qui   tu   as   insultée]   [*French*: Pesetsky 1998, 343]

           the-man   the wife   of whom you have insulted

In the relative clauses in (54) the relative operator presumably contributes information which cannot be recovered if the operator is deleted. "Deletion up to recoverability", then, should allow these operators to escape deletion, which seems to be the wrong prediction.

       An alternative account, which fits naturally into the theory under development here, would say that the relative operator in these examples cannot be a DP because this would bring the DP operator unacceptably close to the D of the relative clause's head, making linearization difficult. Consider the tree in (55) for the ill-formed example in (54a):

(55) * DP

```
        DP
       /  \
      D    NP
      a    /  \
          N    CP
       person  /  \
             DP    C'
            /  \   /  \
     whose uncle C    TP
                     / \
                  to admire
```

Here the relative operator *whose uncle* is in the highest specifier of the CP phase, and in the

version of spell-out that we assume here, this means that this DP is spelled out in the higher

phase. If we assume, as we have above, that DP is not a phase, then the D *a* is not a phase head,

and does not trigger spell-out of its complement. As a result, the D *a* and the DP *whose uncle*

(or, if we prefer, the D which presumably makes up part of *whose*) are linearized in the same

phase, and the resulting linearization statement <D, D> is uninterpretable.

Besides being another case of Distinctness, these relative clause examples demonstrate

that Distinctness effects need not be triggered by string-adjacent syntactic objects. In (55), the

two instances of D are not string-adjacent.

On the account given here, the behavior of English tensed relative clauses becomes

problematic, since the constraints discussed above do not hold of these relative clauses:

(56)   a. the man [whom I admire]

        b. the man [whose wife I insulted]

One option would be to posit structure intervening between the head and the operator which is not present in the relative clauses discussed above, so that the relative operators in these examples are not spelled out as part of the same phase as the D of the modified DP[11].

2.2.3 DP-internal syntax

Cross-linguistically, nominal arguments of nouns are often accompanied by functional structure not found with nominal arguments of verbs. In English, for instance, the complement of a noun is introduced by *of*:

(57) a.   They destroyed the city

       b.   * [the destruction the city]

       c.   [the destruction **of** the city]

The Chaha morphem *yə-*, which we encountered in section 2.2 above as a marker of indirect objects of ditransitives and specific animate direct objects of monotransitives (a distribution for which I tried to provide an account) also appears on possessors, without regard to specificity or animacy:

(58)   yə-βet   wəka

       yə house roof-beam

       'the house's roof-beams'

Similarly, Torrego (1998, 40) notes that complements of derived nominals in Spanish can sometimes be marked with *a*, and that such marking does not exhibit the animacy restriction typical of *a* on direct objects of verbs:

---

[11] Pesetsky and Torrego (to appear) offer a different account; they argue that *whom* in examples like (55a) is in fact an agreeing complementizer, rather than an operator. As they note, the challenge for them is then to account for the well-formedness of examples like (55b). They suggest that the problem is more general, with examples like (54a) also being less than completely ill-formed for many speakers (their example parallel to (54a) is given in (i)):
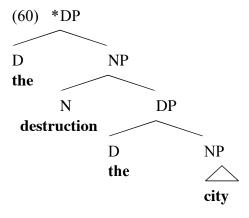(i) %a person [whose virtues] to admire

(59)   a. Su amor al   dinero

his love *A*-the money

'his love of money'

b. Aman   (*a) el dinero

they-love *A* the money

'They love money'

We will return in section 4.1.1 to the question of why animacy is no longer relevant when these markers are used on DP-internal arguments.
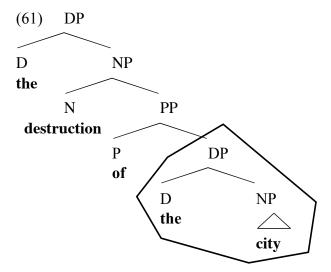
Some of these facts about the arguments of nouns are among those which have classically been attributed to the Case Filter; nouns are supposed to be unable to license Case. A Distinctness-based account might be able to provide more insight into these facts. The account would have the virtue, unlike previous Case-based accounts, of offering an explanation for why it is nouns that require additional structure to be introduced when they take nominal complements. Consider a tree for the ill-formed (57b):

(60)   *DP

D   NP
the
     N   DP
   destruction
          D   NP
         the   city

This tree is unlinearizable, for reasons that by now are familiar; in the process of linearizing it, the grammar will generate the ordered pair <D, D>, which will cause the derivation to crash. Again, the offending nodes are not linearly adjacent, but they are structurally close enough together to prevent linearization from succeeding.

The solution apparently involves adding a preposition, which we must regard, on this account, as a phase head:

(61)   DP

```
        DP
       /  \
      D    NP
     the   / \
         N    PP
    destruction / \
             P      DP
             of   /    \
                 D       NP
                the      △
                        city
```

If the P *of* is a phase head, then its complement will be spelled out, and as a result, the two instances of D will be spelled out in different phases.

On the account developed here, the contrast in (62) and the one in (63) have the same explanation:

(62)   a.   *the destruction the city

        b.   the destruction **of** the city

(63)   a.   *a man [who to dance with]

        b.   a man [**with** whom to dance]

(62a) and (63a), on this account, have the same problem; they both have a DP contained inside another DP, and not separated from it by any spell-out boundaries. (62b) and (63b) both solve this problem in the same way, by further embedding of the DP which is contained in the larger DP. By hypothesis, the embedding of the contained DP in a PP puts it in a separate Spell-out domain from the containing DP, rendering the structure well-formed.

The contrast in (62), of course, is one of the contrasts which has classically been attributed to Case theory; nouns are unable to assign Case, for some reason, and hence cannot take DP complements. In the classic account, the contrasts in (62) and (63) have nothing to do with each other. The account developed here explains why it is nouns and not verbs which have the contrast in (62); DPs cannot be complements of nouns because this brings them unacceptably close to another instance of D. The contrast in (62) thus follows from more general considerations, which have nothing to do with case, or even specifically with DPs.

3.   What nodes are distinct?

Distinctness outlaws linearization statements that attempt to linearize nondistinct nodes. The preceding discussion has concentrated on cases in which the relevant notion of distinctness for nodes can be captured via the rough definition offered in the introduction: two nodes are nondistinct if they have the same label. As I remarked in the introduction, this grants labels a suspicious level of importance; it is not clear that we want the grammar to refer to node labels quite this directly. I suggested there that nodes are in fact identified by their features, and that in some cases this is virtually equivalent to identifying them by their labels; in some languages, for some kinds of nodes, all nodes with the same label apparently have the same features. In this section we will go into the question of how to define distinctness a little more closely. We will consider a number of cases in which Distinctness effects are avoided by giving different features to the potentially offending nodes.

3.1 Polish complementizers and clitics

Polish has a kind of agreement morphology which can appear in a number of places (often analyzed as a clitic; see Borsley and Rivero 1994, Embick 1995, Szczegielniak 1997, 1999 for

discussion). This agreement morphology appears most frequently on the complementizer or the

verb (though it can also appear on focused constituents):

(64)   *Polish* (Adam Szczegielniak, p.c.)

    a.   On wie   że poszedł**eš** do kina

              he knows that went-2SG to movies

              'He knows that you went to the movies'

    b.   On wie   że**š**   poszedł do kina

              he knows that-2SG went   to movies

A colloquial register of Polish also allows declarative clauses to have two complementizers.

When two complementizers appear, however, agreement must be placed on one of them (in fact,

it must appear on the second complementizer, a fact Szczegielniak (1999) discusses):

(65)   *Polish* (Adam Szczegielniak, p.c.)

    a.   On wie   że że**š**   poszedł do kina

              he   knows that that-2SG went   to movies

    b.   *On wie   że że poszedł**eš** do kina

               he knows that that went-2SG to movies

This state of affairs seems amenable to an account in terms of Distinctness. In (65b), we would

say, the two Cs cannot be linearized, since linearization statements like <C, C> make

linearization crash[12]. In (65a), by contrast, one of the Cs has the agreement clitic adjoined to it.

As a result, this C now has a different set of features, which means that the two C nodes are

distinct. The relevant linearization statement is now something like <[C], [C, 2SG]>. Here,
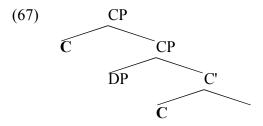
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[12] For this account to succeed, the CPs cannot be separated by a spell-out boundary.

then, is a particularly straightforward case of making two nodes distinct by adding features to one of them.

The Polish case has another interesting property; the requirement that agreement appear on the lower complementizer remains even if a topicalized NP linearly intervenes between the two complementizers (Szczegielniak 1999 and p.c.):

(66) a. On myšlał że Janowi że**š** dał książkę

        he thought that John that-2SG gave book

        'He thought that you gave the book to John'

  b. * On myšlał że Janowi że da**łeš** książkę

        he thought that John that gave-2SG book

Here we have another case of a Distinctness effect which is demonstrably not about linear adjacency; the two complementizers in (66) are not linearly adjacent, but must still be distinguished by the agreement clitic. This is what we expect, since the linearly intervening material does not introduce a node that dominates the lower C, in this case, and therefore cannot possibly be introducing a phase boundary between them. The relevant tree would be the one in (67):

(67)

```
            CP
          /    \
         C      CP
              /    \
            DP      C'
            |      /   \
            C
```

Here the linearly intervening DP is of no use in linearizing the two Cs.

3.2 Multiple sluicing revisited

We saw in section 1.2 that English allows multiple sluicing, as long as the wh-phrases obey Distinctness:

(68)   a.   Someone was dancing with somebody, but I don't know [who] [with whom]

   b.   * Someone insulted somebody, but I don't know [who] [whom]

Multiple sluicing in English cannot involve multiple DP remnants.

   Interestingly, this condition is not universal. German (Sauerland 1995) and Japanese (Takahashi 1994) multiple sluicing allows multiple DP remnants:

(69)   a. Ich habe jedem Freund ein Buch gegeben,

   I   have every friend a   book given

         aber ich weiß nicht mehr wem welches

         but   I   know not   more who which

'I gave every friend a book, but I don't remember anymore who which'

   b. Watashi-wa dono otokonoko-ni-mo hoshigatteita subete-no hon-o ageta ga,

   I   TOP every boy   DAT   wanted   every   book gave but

      dare-ni   nani -o   ka wasureta.

      who DAT what ACC Q forgot

'I gave every boy all the books he wanted, but I've forgotten who what'

Japanese and German also differ from English in having comparatively rich case marking on nominals, and we might entertain the possibility that this is a relevant difference; Japanese and German DPs are sufficiently distinct from one another that they can legitimately be brought close together.

In fact, we can find evidence in Japanese that this is correct. Consider the contrast in (70) (Takako Iseda, Shin Ishihara, Sachiko Kato, Kazuko Yatsushiro, p.c.):

(70) a. [Sensei-o   hihansita] gakusei-ga   koko-ni   oozei iru kedo,

teacher ACC criticized student NOM here DAT many be but

dare-ga   dare-o   ka oboeteinai.

who NOM who ACC Q remember-NEG

'There are lots of students here who criticized teachers,

but I don't remember who who'

b. * [Sensei-ga   suki na] gakusei-ga   koko-ni   oozei iru kedo,

teacher NOM like   student NOM here DAT many be but

dare-ga   dare-ga   ka oboeteinai.

who NOM who NOM Q remember-NEG

'There are lots of students here who like teachers,

but I don't remember who who'

Although, as we have seen, Japanese does allow multiple DP remnants in multiple sluicing, these remnants cannot all be of the same case. (70a), with one nominative remnant and one accusative remnant, is well-formed, but (70b), with two nominative remnants, is ill-formed[13]. Interestingly,

---

[13] As Kazuko Yatsushiro (p.c.) points out, the contrast in (70) is not simply a confusion about which of the two ga-marked DPs is the experiencer and which is the target of the emotion. Adding *no koto* to one of the DPs marks it unambiguously as the target of emotion, but there is still a contrast between (i) and (ii):
(i)   * [[sensei -no   koto] -ga suki na gakusei-ga   koko-ni   oozei iru kedo,
       teacher GEN matter NOM like   student NOM here DAT many be but
              dono gakusei-ga   dono sensei -no koto ga   ka oboeteinai.
       which student NOM which teacher GEN matter NOM Q remember-NEG
       'There are lots of students here who like teachers, but I don't remember which student which teacher'
(ii)   [[sensei -no   koto] -o   suki na gakusei-ga   koko-ni   oozei iru kedo,
       teacher GEN matter ACC like   student NOM here DAT many be but
              dono gakusei-ga   dono sensei -no   koto o   ka oboeteinai.
       which student NOM which teacher GEN matter ACC Q remember-NEG
       'There are lots of students here who like teachers, but I don't remember which student which teacher'

the facts seem to change, at least for some speakers, when the two nominative remnants differ in animacy; these speakers find (71) better than (70b):

(71)   [doobutsu-ga   suki na] hito-ga   koko-ni   oozei iru kedo,

       animal   NOM like   person NOM here DAT many be but

       dare-ga   nani-ga   ka oboeteinai.

       who NOM who NOM Q remember-NEG

       'There are lots of people here who like animals,

         but I don't remember who what'

Japanese exhibits a similar restriction on multiple rightward shift. Multiple DPs may be shifted to postverbal positions, but these must differ either in case or in animacy:

(72)   a.   Suki da   yo,   **John-ga   Mary-o**

       like COP ASST John NOM Mary ACC

       'John likes Mary'

    b.   Suki da   yo,   **John-ga   chokoreeto-ga**

       like COP ASST John NOM chocolate NOM

       'John likes chocolate'

    c.   * Suki da   yo,   **John-ga   Mary-ga**

       like COP ASST John NOM Mary NOM

       'John likes Mary'

(72c) is ruled out because the two postverbal DPs are both nominative and both animate; examples in which only one DP is nominative (72a) or animate (72b) are well-formed.

    Apparently, then, Japanese DPs are more distinct from each other than English DPs are. Two English DPs always trigger a Distinctness violation if they are linearized in the same phase,

as in the multiple sluicing examples. The hypothesis pursued in this paper has been that English DPs cannot be distinguished from each other by linearization statements. As a result, if a Spell-out domain in English contains two DPs in an asymmetric c-command relation, the two DPs will be related by a linearization statement <DP, DP>, and this statement will cause the derivation to crash.

In Japanese, by contrast, two DPs are undistinguishable only if they have the same values for case and animacy. Linearizing multiple Japanese DPs, then, involves linearization statements like <[DP, NOM, Animate], [DP, ACC, Inanimate]>, and such linearization statements are not self-contradictory. Crucially, the fact is not that Japanese is simply immune to Distinctness; rather, its DPs apparently come in more varieties than their English counterparts[14].

The German situation may be similar, though here the facts are much less clear-cut[15]. Unlike Japanese, German has no class of predicates which routinely assigns the same case to multiple arguments. We must therefore consider biclausal cases, with multiple sluicing remnants from different clauses. Not all speakers allow this, even when the lower clause is a restructuring infinitive, and for those who do, not all speakers find any contrasts of the type Distinctness leads us to expect. When there is a contrast, however, it runs in the expected direction:

---

[14] Given this conclusion, we might wonder how Japanese allows multiple-nominative examples like (i):
(i)   John-ga   Mary-ga   suki da.
           John NOM Mary NOM likes COP
           'John likes Mary'
See Yang (2005) for arguments that the Korean version of this construction always involves A-bar movement of the higher nominative DP to a higher position, perhaps introducing a clause boundary between the two DPs.
[15] Many thanks to Kleanthes Grohmann, Winnie Lechner, Joachim Sabel, Uli Sauerland, Michael Wagner, and Susi Wurmbrand for their judgments.

(73) a. Es ist einem Ritter gelungen, einen Riesen totzuschlagen,

  it is a.DAT knight succeeded a.ACC giant kill.INF

  aber ich weiß nicht mehr **welchem Ritter welchen Riesen**.

  but I know not more which.DAT knight which.ACC giant

  'A knight succeeded in killing a giant, but I don't know any more

  which knight (killed) which giant'

  b.?? Es ist einem Ritter gelungen, einem König zu helfen,

  it is a.DAT knight succeeded a.DAT king to help

  aber ich weiß nicht mehr **welchem Ritter welchem König.**

  but I know not more which.DAT knight which.DAT king

  'A knight succeeded in helping a king, but I don't know any more

  which knight (helped) which king'

  c. Es ist einem Ritter gelungen, einer Königin zu helfen,

  it is a.DAT knight succeeded a.DAT queen to help

  aber ich weiß nicht mehr **welchem Ritter welcher Königin.**

  but I know not more which.DAT knight which.DAT queen

  'A knight succeeded in helping a queen, but I don't know any more

  which knight (helped) which queen'

There are speakers who accept all of the examples in (73), and speakers who reject them all, but of the speakers who get a contrast, the contrast is as represented here. This is the expected contrast; the least acceptable example is the one with multiple DPs of the same gender and case.

How can we determine independently whether a language is of the English type or of the Japanese/German type? I will have to leave this question to future research, unfortunately.

Japanese and German case morphology is certainly richer than English case morphology by any reasonable definition, but principles based on morphological richness have not had a happy history in the syntactic literature, and I am hesitant to invoke a new one here. Morever, in Japanese, at least, the relevant feature seems to be not only case but animacy, which is no more richly represented in Japanese morphology than it is in English. More work on the conditions on multiple sluicing in different languages seems to be in order. The point of this section is simply that languages can vary in which features they take into account for purposes of linearization; the reasons for this variation will have to be discovered in future work.

3.3 Multiple-wh-fronting

Languages with multiple overt wh-movement pose an apparent problem for Distinctness; how are Serbian sentences like the one in (74) (from Rudin 1988) linearized, given that they appear to have two DPs in close structural proximity to each other?

(74)   Ko   koga vidi?

who whom sees

'Who sees whom?'

In fact, it turns out that multiple fronted wh-phrases in Serbian and Croatian are subject to Distinctness[16]. The situation is reminiscent of the Japanese and German facts reviewed in the last section; Serbian and Croatian apparently distinguish between DPs of different Cases and genders, but if multiple wh-fronting would bring DPs with the same gender and case into proximity, it is avoided.

Consider, for example, the following Serbian sentences (Sandra Stjepanović, p.c.):

---

[16] Many thanks to Martina Gračanin-Yuksek for pointing this out to me, and for much subsequent discussion.

(75) a. Kojem je čovjeku kojeg dječaka mrsko pozdraviti?

which.DAT AUX man.DAT which.ACC boy.ACC boring greet.INF

'Which man doesn't feel like greeting which boy?'

b. * Kojem je čovjeku kojem dječaku mrsko pomogati?

which.DAT AUX man.DAT which.DAT boy.DAT boring help.INF

'Which man doesn't feel like helping which boy?'

c. *Kojem je čovjeku kojoj ženi mrsko pomogati?

which.DAT AUX man.DAT which.DAT woman.DAT boring help.INF

'Which man doesn't feel like helping which woman?'

In (75), the subject receives quirky Dative case from the adjective *mrsko* 'boring'. Multiple wh-fronting is then banned if the result would bring two Dative DPs together, regardless of whether they match in gender (75b-c).

The Croatian data in (76) are similar (Martina Gračanin-Yuksek, p.c.). These examples involve a modal construction in which the subject is dative and the verb is infinitival:

(76) a. ?? Kojem je čovjeku kojem dječaku pomoči?

which.DAT AUX man.DAT which.DAT boy.DAT help.INF

'Which man is to help which boy?'

b. Kojem je čovjeku pomoči kojem dječaku?

which.DAT AUX man.DAT help.INF which.DAT boy.DAT

'Which man is to help which boy?'

The ill-formed (76a) contrasts with (77), in which the two nouns have different cases:

(77)   Kojem   je čovjeku kojeg   dječaka   pozdraviti?

         which.DAT AUX man.DAT which.GEN boy.GEN greet.INF

         'Which man is to greet which boy?'

Martina Gračanin-Yuksek (p.c.) assigns an intermediate status to (78), in which the wh-fronted

DPs are of the same Case but different genders:

(78) ?Kojem   je čovjeku kojoj   ženi   pomoči?

     which.DAT AUX man.DAT which.DAT woman.DAT help.INF

     'Which man is to help which woman?'

Gračanin-Yuksek finds (78) better than (76a) but worse than (77). If (78) and (76a) do indeed

contrast, unlike the parallel Serbian examples in (73b-c), then this represents a difference

between Serbian and Croatian, or perhaps a difference between the structure in (73) and that in

(76-78).

     Case syncretism has an interesting effect in this regard. Consider, for example, multiple-

wh questions involving the predicate *sram* 'ashamed'. This predicate takes an accusative

experiencer and a genitive theme:

(79) koju   je ženu   koje   žene   sram?

      which.ACC AUX woman.ACC which.GEN woman.GEN ashamed

      'Which woman is ashamed of which woman?'

Animate masculine nouns have the same form for the accusative and the genitive (I will gloss the

syncretic form with 'GEN' in what follows). If we change (79) by making both arguments of the

predicate masculine nouns, speakers find the result ill-formed, but the effect is apparently very

subtle (Martina Gračanin-Yuksek, Damir Ćavar, Sandra Stjepanović, Željko Bošković, p.c.)

(80)?? kojeg   je   čovjeka kojeg   dječaka sram?

       which.GEN AUX man.GEN which.GEN boy.GEN ashamed

       'Which man is ashamed of which boy?'

To avoid ill-formedness in (80), the second wh-phrase is not moved:

(81)   kojeg   je   čovjeka sram   kojeg   dječaka?

       which.GEN AUX man.GEN ashamed which.GEN boy.GEN

       'Which man is ashamed of which boy?'

We will apparently need to adopt an approach to syncretism which takes it seriously enough for its effects to be visible at the point in the derivation at which Distinctness applies. At the same time, we might wish to capture the comparative subtlety of the effect in (80) by allowing the system to distinguish between the two DPs for part of the derivation, losing that ability only once syncretism is applied. For instance, a Distributed Morphology approach which treats syncretism by impoverishing formal features in the syntactic representation might have the desired effect.

      We can find similar data in Russian[17]. Here, again, the judgments seem to be quite subtle, but speakers who report contrasts report the expected ones.

---

[17] Many thanks to Alya Asarina, Lydia Grebenyova, and Arthur Stepanov for their judgments.

(82) a. **Kakomu   zhurnalistu   kakogo   diplomata**   nuzhno zavtra privetstvovat'?

which.DAT journalist.DAT which.ACC diplomat.ACC must   tomorrow greet.INF

'Which journalist needs to greet which diplomat tomorrow?'

b.?? **Kakomu   zhurnalistu   kakomu   diplomatu**   nuzhno zavtra   zvonit'?

which.DAT journalist.DAT which.DAT diplomat.DAT must   tomorrow call.INF

'Which journalist needs to call which diplomat tomorrow?'

c. **Kakomu   zhurnalistu   kakoj   zhenshchine** nuzhno zavtra   zvonit'?

which.DAT journalist.DAT which.DAT woman.DAT must   tomorrow call.INF

'Which journalist needs to call which woman tomorrow?'

As we expect, examples like (82b) with multiple fronted DPs of the same gender and case are

judged worse, by some speakers, than examples like (82a) in which the fronted DPs differ in

case, or examples like (82c) in which they differ in gender.

The data from Serbian, Croatian, and Russian are interesting in several respects. First,

they represent another Distinctness case, found in a particularly unpromising place; these

languages typically front all wh-phrases, and routinely front sequences of DPs. As in the

Japanese and German cases in the last section, however, this indicates not that Russian, Serbian,

and Croatian wh-fronting is immune to Distinctness, but that these languages make finer

distinctions among DPs than English does.

The particular distinctions that these languages are making are also interesting.

Crucially, the requirement is not simply that the wh-phrases contain different words; they must

have different cases. Moreover, the distinction between cases is not drawn simply on the basis of

morphology; Distinctness violations can involve DPs of different genders but the same case,

yielding structures which are either fully degraded or at least somewhat degraded.

4.   How to become distinct

In this section we will see some of the methods languages use for avoiding Distinctness

violations. The discussion will touch on several of the phenomena we have already discussed,

and we will also see several new examples. Methods of avoiding Distinctness violations come in

four main groups. First, we will see examples in which Distinctness violations are avoided by

adding extra structure; given the approach developed here, we will have to regard these extra

morphemes as phase heads, introducing a Spell-out boundary between the potentially

unlinearizable nodes. Second, we will see examples in which Distinctness violations are avoided

by removing offending structure. Third, we will review some cases in which movement

operations that would create Distinctness violations are blocked. And finally, we will see

examples in which movement breaks up potential Distinctness violations, moving offending

nodes further apart.

4.1 Adding structure

We have already seen several cases in which structure is added to avoid a Distinctness violation.

The contrast in (83) is one case in point:

(83)   a.   *the destruction the city

        b.   the destruction **of** the city

The following sections will discuss some similar cases.

4.1.1 Differential case marking

In section 2.1.2, we saw that in some languages, Case particles are added to DPs that are too

close to other DPs for linearization:

(84)   Gɨyə yə-fərəz nəkʷəsənɨm   [*Chaha*]

   dog **yə** horse bit

'A dog bit a (specific) horse'

When it is being added to direct objects or indirect objects, this case particle is only added to animate DPs, a distinction Chaha shares with Spanish, Hindi, and Miskitu. In section 2.2.3, we saw that the animacy restriction disappears when a DP is embedded in another DP:

(85)   yə-βet   wəka

   yə house roof-beam

'the house's roof-beams'

Torrego (1998) points out similar examples in Spanish:

(86)   a. Su amor al   dinero

     his love *A*-the money

'his love of money'

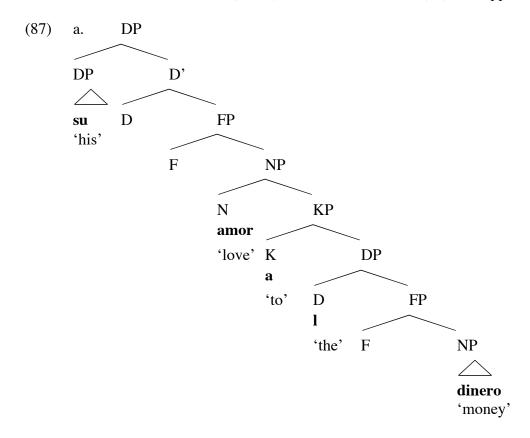   b. Aman   (*a) el dinero

     they-love *A* the money

'They love money'

The theory under development here might make this look like a natural contrast.

    In the paper so far, I have drawn trees as though the extended projection of a noun phrase consists entirely of NP and DP (and sometimes K(ase)P). Much work on DP structure, however, argues that the functional structure is more articulated than that (Bernstein 1991, Ritter 1991, Valois 1991, Longobardi 1994, 2001, among much other work). Just to avoid committing myself to any particular structure, I will simply insert an FP between DP and NP in the trees that follow, which will represent whatever functional structure intervenes between these nodes.

Let us consider trees for (86a-b). Movement traces in (87) are suppressed:

(87) a.

```
                  DP
              ┌────────┐
             DP         D'
             △       ┌──────┐
            su       D        FP
           'his'          ┌────────┐
                          F          NP
                                ┌──────────┐
                                N           KP
                              amor      ┌──────────┐
                             'love'  K          DP
                                     a      ┌────────┐
                                    'to'   D          FP
                                    l    ┌──────────┐
                                  'the'  F           NP
                                                     △
                                                   dinero
                                                   'money'
```

b.

```
            TP
        ┌────────┐
       DP         T'
       △      ┌──────────┐
     pro_they  T            vP
              aman     ┌──────────┐
             'they    DP          v'
             love'  ┌─────┐    ┌──────┐
                    D     FP   v      VP
                    el  ┌────┐        △
                   'the' F   NP
                            △
                          dinero
                          'money'
```

Consider the position of the DP *el dinero* 'the money' in these two trees. In (87a), this DP is

asymmetrically c-commanded, not just by another D, but also by F, which, let us recall,

represents here all the functional structure in the extended projection of the embedding noun

amor 'love'. In (87b), on the other hand, *el dinero* is asymmetrically c-commanded by another

DP, but not by F or FP. The fact that *el dinero* must be embedded in a KP in (87a) but need not

be in (87b) might be made to follow from this. The idea would be that Spanish DPs, like

Croatian and Japanese DPs, come in more varieties than English DPs do; in particular, a DP may

be associated with either animate or inanimate features. As a result, sentences like (87b) do not

pose a problem for Distinctness, since the two DPs can be linearized via a linearization statement

<[DP, animate], [DP, inanimate]>.

What about (87a)? Here the DP *el dinero* 'the money' is c-commanded by F as well as

by D. Thus, even if the D is safe from a Distinctness violation by virtue of the features

associated with it, as long as there is some head in F which *el dinero* and the embedding DP have

in common, Distinctness will be violated. If, for example, there is an *n*P parallel to *v*P, which all

DPs share, then these two instances of *n* will violate Distinctness if nothing is done. Thus,

although no *a* is needed in (87b), an *a* is needed in (87a). To put it another way, we expect

differential case marking to appear more consistently for DP-internal arguments than for direct

objects[18].

4.1.2 Perception verb passives, Italian double infinitives

In section 2.1.1 above, we saw several cases of bans on strings of verbs, which I attributed to

Distinctness:

---

[18] We might also expect to be able to save the structure by moving the embedded DP to a high position within the embedding DP, raising it out of the c-command domain of heads that would cause linearization problems. The general prediction is that movement of this type will be in complementary distribution with the kind of generalized differential Case marking under discussion here.

(88)   a. *John was seen __ leave

        b.*Paolo potrebbe sembrare   dormire   tranquillamente

          Paolo could   seem-INF sleep-INF quietly

        c.*It's continuing raining

Several of the phenomena above have an intriguing property in common; they can be rescued by

the insertion of a preposition. This is true, for instance, of some cases of passives of bare-

infinitive-taking verbs in English:

(89)   a. John was seen __ [to leave]

        b. John was made __ [to leave]

Here we have another instance in which a potential Distinctness violation is circumvented by

adding a functional head. Given the theory developed here, we need to see these instances of *to*

as phase heads (or at least as heads indicating the existence of a phase boundary)[19].

        Interestingly, the insertion of *to* seems to be a last-resort strategy; the active counterparts

of the examples in (89) are ill-formed:

(90)   a. *We saw John to leave

        b. *We made John to leave

        Similarly, in Italian, potential violations of the double-infinitive filter can be rescued by

separating the two verbs with a preposition:

---

[19] Given that these examples involve passives, we must apparently conclude that it is possible to passivize across a
phase boundary, if we want to maintain the assumption that Distinctness is crucially sensitive to phase boundaries.
The fact in (89) might be related to a puzzle that came up in section 2.1.1; the double-infinitive filter appears in
some Romance languages, like Italian, but not in others, like Spanish and French. Perhaps the relevant difference
between Italian and the other Romance languages has to do with whether the infinitival verbs in question are
relevantly like English bare infinitives or like English infinitives with *to*.

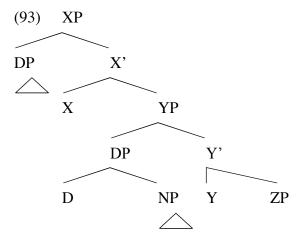(91)   a. *Claudio potrebbe desiderare finire   il suo lavoro

            Claudio could   want-INF finish-INF the his work

        b. Claudio potrebbe desiderare **di** finire il suo lavoro

For some verbs, at least, this preposition-insertion has the same last-resort character that it does

in English; for some speakers, such prepositions cannot be naturally inserted when no violation

of the double-infinitive filter is at stake:

(92)   ??Claudio desidera di finire il   suo lavoro

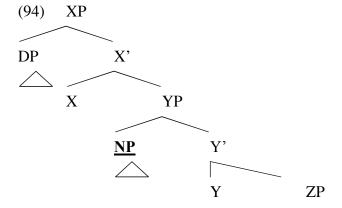   Claudio wants   to finish the his work

4.2 Deleting structure

Consider the tree in (93), in which two DPs share a spell-out domain:

(93)   XP

The tree in (93) is unlinearizable, since the process of linearizing it will generate the

uninterpretable ordering statement <DP, DP>. The previous sections have concentrated on one

way of avoiding this kind of violation, which is to add a layer of structure to one of the DPs,

protecting it from linearization with the other DP.

        Another way of fixing the tree in (93), however, would be to remove one of the DP

nodes, making that DP into an NP:

(94) XP

```
        XP
       /  \
     DP    X'
     /\   /  \
        X     YP
            /    \
          NP      Y'
         /\      /  \
               Y      ZP
```

The tree in (94) is linearizable, since there is now no ordering statement <DP, DP>.

The following sections will concentrate on cases of the type illustrated in (94), in which Distinctness violations are avoided by removing structure. The cases we have discussed in this paper so far have all centered on interactions between functional heads, and in fact there are no clear cases of Distinctness violations involving lexical heads. As we will see, one response to Distinctness violations is removal of the offending functional structure.

4.2.1 Chol

Coon (2006) discusses data from Chol, a Mayan language, which we can interpret in terms of a strategy of removing functional structure in order to satisfy Distinctness. Chol sentences may have SVO word order, in which case both arguments may be DPs:

(95)   **ili** wiñik ti   i-   choñ-o **hiñi** wakaš

       this man PERF 3ERG sell TV D   cow

       'This man sold the cow'

Both arguments may also be postverbal, but in this case the object must lack a determiner:

(96)   ti   i-   mek'-e   š`išik **hiñi** wiñik

       PERF 3ERG hug TV woman D   man

       'The man hugged a/the woman'

Multiple postverbal DPs are ruled out:

(97) *ti   i-   hats'-ä **hiñi** ts'i` **hiñi** wiñik

     PERF 3ERG hit TV D   dog D   man

     'The man hit the dog'

The option of having a bare NP argument in Chol is reminiscent of much work on incorporation

(Baker 1988 and much other work) and pseudo-incorporation (Massam 2001)[20]. What is

particularly interesting about Chol is the way in which this option is tied to word order. From a

point of view that includes Distinctness, we can see the Chol facts as mirroring the facts about

English quotative inversion with which we began the paper:

(98)   a.   "It's cold," said John to Mary

     b.   * "It's cold," told John Mary

The difference between Chol and English, on this account, has to do with the availability of a

strategy in Chol that allows it to circumvent the conditions that rule out examples like (98b) in

English. Unlike English, Chol allows its arguments to be NPs, which means that it can leave

both arguments of a transitive verb in postverbal positions, as long as one of them is an NP.

4.2.2 Restructuring

    Longobardi (1980) offers one general class of counterexamples to the Italian double-

infinitive filter, which is of interest here. Restructuring infinitives may freely violate the double-

infinitive filter, and restructuring becomes obligatory when a violation of the filter is at stake:

(99)   a. Giovanni comincia a volerlo   fare

      Giovanni begins   to want-INF-it do-INF
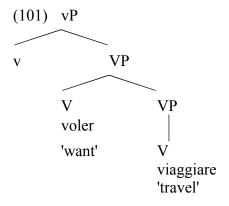
    b. *Giovanni comincia a voler farlo

---

[20] Nothing about the account developed here would explain why NP complements in some languages (e.g., Mohawk) must incorporate. Massam's (2001) work suggests that this is a language-specific choice, as languages can in fact have NP complements which do not incorporate (so-called "pseudo-incorporation").

The obligatory nature of restructuring in (99) is indicated by the obligatory clitic climbing. Note that the clitic climbing is not required because the clitic must intervene between the two verbs in order for the example to be well-formed; (100) is also well-formed, presumably because *volere* selects for a restructuring infinitive, though there are no clitics in this example to undergo clitic-climbing:

(100)   Giovanni comincia a voler   viaggiare da solo

        Giovanni begins   to want-INF travel-INF alone

Wurmbrand (1998, 2001) argues convincingly that restructuring infinitives lack functional structure, consisting simply of a VP. In her approach, a sentence like (100) would contain the partial structure in (101):

(101)   vP

v   VP

        V   VP
        voler |
        'want'   V
                          viaggiare
                          'travel'

The instances of Distinctness discussed above have involved *v* heads which need to be linearized. But in this case the lower verb lacks a *v* head; the pair <*voler, viaggiare*> can therefore be used to linearize the sentence successfully.

4.2.3 Construct State

Section 2.2.3 discussed contrasts like the one in (102):

(102)   a. *[the destruction [a city]]

        b. [the destruction [of a city]]

The problem in (102a), on the theory developed here, was the difficulty of linearizing the D *the* with the D *a*; an ordering statement of the form <D, D> is ruled out by Distinctness. In (102b), on the other hand, *the* and *a* can be linearized; the PP node which dominates *of a city* introduces a phase boundary which protects the two DPs from each other, so that they are not linearized in the same phase and no ordering statement need order them directly.

Another way of avoiding the problem in (102a) would be to omit one or both determiners. Omission of the higher determiner is indeed a cross-linguistically popular approach to expressing nominal possessors, going by the name of construct state. In Hebrew, for instance, possession may be indicated either with a structure like that in (102b) (given in (103a)) or by the use of a construct state nominal like the one in (103b). The examples in (103) are synonymous:

(103) a. ha-bayit šel ha-mora

the house of the teacher

b. beyt   ha- mora

 house the teacher

A nominal like (103b) should pose no problems for linearization, since there is only one determiner. Crucially, construct state nominals cannot contain two determiners:

(104) *ha-beyt ha-mora

Irish also exhibits construct state nominals[21]:

(105) a. hata an fhir

hat   the man-GEN

'the man's hat'

b. *an hata an fhir

Interestingly, in cases of multiply embedded construct state nominals, all the nouns except the most deeply embedded one not only must lack determiners but must be in the nominative (unmarked) case, rather than in the genitive case (Ken Hale, personal communication, Bammesberger (1983, 33)):

(106)   a. hata fhear an tí

            hat man   the house-GEN

        'the hat of the man of the house'

        b. *hata an fhear an tí

        c. *hata (an) fhir   an tí

              hat   the man-GEN the house-GEN

We might take this as an indication that all of the nouns other than the most deeply embedded one must lack all functional structure; not only must D be missing, but K(ase) must be missing as well. In previous examples involving K I have suggested that this is a phase head, shielding the DP it dominates from linearization with higher instances of D. Apparently in Irish this is not the case: if K were a phase head in Irish, there would be no reason to remove it in examples like (106a). It is perhaps relevant that modern Irish does not distinguish Nominative and Accusative case; this suggests that Case may not function as a means of linearization in Irish.

        Walter (2005) points out that Akkadian had a similar type of construct state, with case morphology vanishing from the head noun. (107a) shows the non-construct state strategy, involving insertion of a preposition, while (107b) shows construct state:

(107) a.   kasp-um   ša šarr-im

            silver NOM of king GEN

            'king's silver'

     b.   kasap šarr-im

            silver king GEN

            'king's silver'

Interestingly, Walter also notes that relative clauses (which must be introduced by DP operators in Akkadian) have the same two options as possessive constructions; recall from section 2.2.2 that relative clauses in many languages show Distinctness effects, presumably triggered by the proximity of the relative operator to the functional structure of the head noun:

(108) a.   kasp-um ša itbal-u(šu)

            silver NOM that he.took SUBORD (it)

     b.   kasap itbal-u(šu)

            silver he.took SUBORD (it)

As with noun possession, the head noun must either be separated from the relative clause by the particle *ša* or must appear in a bare, caseless form. Distinctness allows the facts in (107) and those in (108) to be connected; they represent two strategies for linearizing structures with one DP embedded inside another.

We can relate these facts to another fact discussed in section 4.1.1 above; when a DP is dominated by another DP projection, all of the functional projections of the embedded DP may be c-commanded by corresponding functional heads in the higher DP. In section 4.1.1, this was the explanation for why differential case marking appears on inanimate DPs just when those DPs are embedded in larger DPs:

(109) a. Su amor al   dinero

      his love *A*-the money

    'his love of money'

    b. Aman   (*a) el dinero

      they-love *A* the money

    'They love money'

In (109a), the embedded DP *el dinero* 'the money' must be Distinct, not just from the D of the

embedding DP, but from all the functional structure of the embedding DP (including, by

hypothesis, structure that all DPs have in common, with the result that even inanimate DPs must

receive differential case marking in this position). The Irish data in (106) and the Akkadian data

in (107-108) have a similar explanation. We cannot avoid all the potential Distinctness

violations by simply removing the DP of the possessor, but must remove all the potentially

offending functional structure, including KP[22].

    In this section we have seen that one way to circumvent Distinctness when a nominal

takes a nominal argument is to eliminate functional structure from one of the nominals.

However, nothing that we have said so far guarantees that it should be the possessor that retains

functional structure and the possessee that lacks it. We might expect to find examples of the

opposite kind, in which the possessor is the nominal that loses its functional structure and

appears as a bare N. Hungarian may offer an example of this type.

---

[22] Surprisingly, Classical Arabic has a form of Construct State in which determiners are removed but Case remains
(Walter 2005, 12)
(i)   kitaab-**u**   -l -walad-i
        book NOM the boy GEN
        'the boy's book'
Classical Arabic differs from Irish in that it does distinguish Nominative and Accusative case; perhaps we can take
this as evidence that Classical Arabic K is a phase head.

Hungarian possession may be expressed in either of two ways. In one, the possessor is marked with dative Case, and appears to the left of the possessee's determiner (Szabolcsi 1994); following Szabolcsi, let us take this to mean that the possessor has moved to a high specifier within the possessed DP:

(110)   Mari-nak   a   kalap-ja   -i

       Mari DAT the   hat   POSS   PL

       'Mari's hats'

The possessor may also appear in the nominative case, which is unmarked. When it does so, it must lack a determiner (see Szabolcsi (1994) for convincing arguments for this) and appears to the right of the possessed DP's determiner:

(111)   (a) Mari kalap-ja   -i

       the Mari hat   POSS PL

This type of possession, then, involves stripping the possessor of its determiner and Case morphology, and we might harbor the suspicion that the possessor in these examples has had all of its functional material removed. On this view, this type of Hungarian possessive construction is like a construct state possessive construction, except that the DP with its functional material removed is the possessor rather than the possessee.
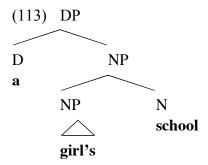
Munn (1995) discusses a construction in English which may have a similar structure. Examples like those in (112) involve what Munn calls 'modificational possession':

(112)   a. two men's shoes

      b. a girl's school

The string of words in (112a), for example, is ambiguous, meaning either 'the shoes of two men' (that is, four shoes) or 'two shoes of the type that men wear' (that is, two shoes). Similarly,

(112b) can mean either 'the school of a particular girl' or 'a school for girls'. It is this second

reading that Munn is concerned with, and he gives examples like (112b) trees like that in (113):

(113)   DP

D   NP

a

NP   N

school

girl's

Once piece of evidence for the constituent structure in (113) comes from *one*-replacement, which

treats *girl's school* as a constituent on the relevant reading:

(114)   this [girl's school] and that [one]

Modificational possession is of interest to us because it involves a possessor which crucially

lacks a D, and which is left below the dominating DP rather than raising to a higher position in

the noun's extended projection. Distinctness allows us to connect these facts; if *girl's* in (113)

were replaced with a DP, the resulting structure would be unlinearizable, since the head of the

dominating DP and that of the modificational possessor would violate Distinctness.

4.3 Movement suppression

A third method that we find for avoiding Distinctness violations is failure to perform a

movement operation that would create an unlinearizable structure. One example of this arose in

section 3.3; we saw there that in Croatian, wh-movement that would bring two DPs with the

same Case and gender unacceptably close together is suppressed:

(115) a. ??Kojem je čovjeku kojem dječaku pomoči?

which.DAT AUX man.DAT which.DAT boy.DAT help.INF

'Which man is to help which boy?'

b. Kojem je čovjeku pomoči kojem dječaku?

which.DAT AUX man.DAT help.INF which.DAT boy.DAT

'Which man is to help which boy?'

Salanova (2004) discusses another case of a similar kind. The case involves inversion of the subject and the verbal complex (that is, the verb along with any auxiliaries, clitics, and negation) in Río de la Plata Spanish. Such inversion is not typically obligatory in wh-questions:

(116) Por qué Juan te llamó?

for what Juan you called

'Why did Juan call you?'

However, inversion becomes obligatory in two types of cases. It is obligatory when the object is wh-moved, and is a bare DP:

(117) a. *Quién Juan quiere que le escriba?

who Juan wants that to.him writes

'Who does Juan want writing him?'

b. Quién quiere Juan que le escriba?

Inversion is also obligatory when the subject and object are both dative:

(118) a. *A quién a Juan le pareció que le habían dado el premio?

to whom to Juan to.him seemed that to.him they.had given the prize

'To whom did it seem to Juan that they had given the prize?'

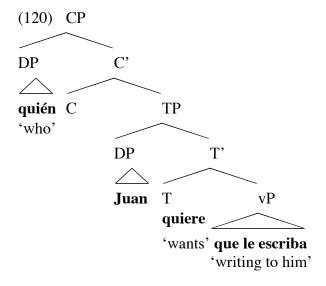b. A quién le pareció a Juan que le habían dado el premio?

Inversion is not obligatory if, for example, the subject is nominative and the wh-fronted phrase is marked with *a*:

(119)   A quién Juan conoció en Buenos Aires?

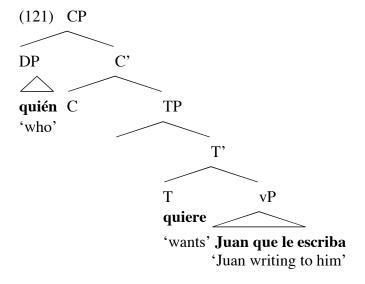   to whom Juan met   in Buenos Aires

          'Who did Juan meet in Buenos Aires?'

Salanova (2004) develops an account of these facts in terms of Distinctness. In this case, the phrases interacting for Distinctness are the fronted wh-phrase and the subject. (117a) has the tree in (120):

(120)   CP

       /\

DP   C'

  /\   /\

quién C   TP
'who'   /\

         DP   T'

        /\   /\

      Juan   T   vP
           quiere   /\
         'wants' **que le escriba**
             'writing to him'

In (120), the two DPs *quién* and *Juan* are in close structural proximity. If they are linearized in the same phase (an issue to which we will return in a moment), then linearization ought to fail.

Salanova offers arguments that inversion in RP Spanish involves leaving the subject in a structurally lower position (rather than, for example, head-movement of the verb into a higher position). The well-formed (117b), for example, has the tree in (121):

(121) CP

```
         CP
        /  \
      DP    C'
      /\   /  \
  quién   C    TP
  'who'         \
                 T'
                /  \
               T    vP
            quiere   /\
            'wants' Juan que le escriba
                   'Juan writing to him'
```

quién
'who' C

quiere
'wants' **Juan que le escriba**
       'Juan writing to him'

The only difference between (120) and (121) is that in (121), the subject *Juan* has failed to raise to the external subject position. If *Juan* can be spelled out in the *v*P phase, then the two DPs will be linearized in different phases, and linearization will succeed.

As Salanova points out, this account of the ill-formedness of (120) crucially requires the specifier of CP and the specifier of TP to be spelled-out in the same phase. He notes that the specifier of matrix CP has a peculiar status in phase theory; since it is the 'edge' of the CP phase, it ought not to be spelled out until a higher phase is completed, but in fact there is no higher phase. Salanova suggests that in RP Spanish, at least, the highest CP edge is in fact spelled out with the rest of its phase, unlike other phase edges[23]. This assumption allows us to account for an intriguing contrast between matrix and embedded questions. Inversion is never obligatory in embedded questions:

(122) Preguntó qué Juan quería hacer

       he.asked what Juan wanted to.do

---

[23] Salanova entertains the possibility that languages might vary in how they treat the edge of the highest phase. Another possibility, as he notes, is that the treatment of phases is uniform but that the landing site of wh-movement in RP Spanish is not actually the highest specifier of the CP phase. The issue is of considerable interest, since we need some way of guaranteeing that not all languages encounter the difficulties that RP Spanish does in linearizing its wh-questions: for example, English questions will have to be different, perhaps in one of the ways outlined here.

The lack of inversion in (122) is expected on Salanova's theory. Because the embedded CP is not the highest phase in the sentence, it can undergo Spell-out in the ordinary way, spelling out its specifier with the higher phase. As a result, *qué* and *Juan* are not spelled out in the same phase in (122), although they would be if the embedded question were a matrix question. Thus, inversion is not obligatory in this case.

We now arrive at an interesting difficulty for our theory, however. Matrix questions with *qué* 'what' require inversion:

(123)   a.   Qué vio Juan en Buenos Aires?

                 what saw Juan in Buenos Aires

                 'What did Juan see in Buenos Aires?'

        b.   * Qué Juan vio en Buenos Aires?

Salanova's account therefore requires *qué* 'what' and *Juan* to be treated as identical for Distinctness. In section 2.1.2, however, we outlined an account of differential case marking, in which we noted that this marking appears specifically on animate objects:

(124)   a.   Laura escondió a un prisionero durante dos años

                 Laura hid   *A* a prisoner for   two years

                 'Laura hid a (specific) prisoner for two years'

        b.   Golpeó (*a) la mesa

                 he/she-hit *A* the table

                 'He/she hit the table'

Data like those in (124) suggest that animate and inanimate DPs are treated as different in Spanish, as far as Distinctness is concerned. In other words, (124b) can apparently be linearized,

and linearization will involve a statement like <[animate DP], [inanimate DP]>. Why can a statement like this not be constructed in (123b)?

One imaginable account of this contrast would trade on the fact that the inanimate DP is c-commanded by the animate one in the well-formed (124b), while the opposite is true in the ill-formed (123b). We might decide to build this asymmetry into the statement of Distinctness. Suppose we decide that inanimate nouns differ from animate ones in lacking a privative feature [animate], so that an animate DP has a superset of the features found on an inanimate one. Then we would need to define Distinctness as saying that a linearization statement $<\alpha, \beta>$ is interpretable just if α has features that β lacks; crucially, if β has a superset of α's features, the two cannot be linearized. We could imagine an algorithm for linearization which proceeds feature by feature on each node α, asking whether that feature distinguishes α from other nodes that α c-commands. Such an algorithm would be able to make an animate DP precede an inanimate one, since it would find the [animate] feature on the animate DP which distinguishes the two. On the other hand, if an inanimate DP c-commands an animate one, the algorithm would find no feature on the inanimate DP which it could use to order the two. Since this redefinition of Distinctness would be a fairly radical one, I will leave the issue here for now, hoping to find more evidence bearing on the question in future research.

4.4 Movement

Moro (2000) develops a theory in which movement, at least in some cases, is caused by a need to avoid linearization failures. Distinctness could be used in a similar way. Since Distinctness is a condition on outputs, I will remain agnostic here about whether Distinctness simply acts as a filter, ruling out the outputs of derivations in which certain movements do not occur, or actually motivates movement in the narrow syntax.

One potentially relevant example came up in section 1.3, in the discussion of Tagalog predication. We saw there that while most types of phrase are freely allowed to be predicates in Tagalog, a DP predicate forces inversion of the normal predicate-initial word order:

(125) a. Umuwi   si Juan

went-home   Juan

'Juan went home'

b. Mataas si Juan

tall   Juan

'Juan is tall'

c. Tungkol sa balarila   ang   libro

about   grammar the   book

'The book is about grammar'

d. Guro si Maria

teacher Maria

'Maria is a teacher'

(126) a.*Ang pangulo si Maria

the   president   Maria

b. Si Maria (ay) ang pangulo

I suggested that the inversion in (126) is driven by Distinctness; the predicate and the subject DP are unacceptably close together, and the subject must therefore be moved into a higher position, perhaps into a different phase.

Many languages seem to use a similar strategy for dealing with structures in which multiple DPs begin the derivation inside the verb phrase. We can contrast Pylkkänen's (2002)

low applicatives (exemplified in (127a)) with what I will call 'prepositional datives', in which the indirect object is expressed as a prepositional phrase:

(127)   a.   I gave John a book

        b.   I gave a book to John

We will see that in (127a), one of the objects is often required to move to a higher position, possibly crossing a phase boundary.

　　　　Soh (1998), for example, discusses differences between low applicatives and prepositional-dative constructions in Chinese. The two constructions are exemplified in (128):

(128)   a.   wo song-le Zhangsan nei-ben shu

                I   gave   Zhangsan that CL book

                'I gave Zhangsan that book'

        b.   wo song-le nei-ben shu   gei Zhangsan

                I   gave   that CL book to Zhangsan

                'I gave that book to Zhangsan'

As Soh points out, adverbs like *liang ci* 'twice' behave differently in these two constructions. Such adverbs intervene between the two objects in the low applicative construction, but precede both of the internal arguments of the prepositional-dative construction[24]:

---

[24] *liang ci* may also appear at the end of the sentence; this option is apparently somewhat degraded in the applicative, for reasons I do not understand.

(129) a.   wo song-le _nei-ge pengyou_ **liang ci** _xiaoshuo_

        I   gave   that-CL friend twice   novel

        'I have given that friend a novel twice'

    b.   wo song-guo   **liang ci** _xiaoshuo gei Zhangsan_

        I   gave   twice   novel   to Zhangsan

        'I gave a novel to Zhangsan twice'

Emonds (1976) and Koizumi (1993) discuss data on the placement of English particles

which are reminiscent of the Chinese data above. In some dialects of English, at least,

postverbal particles must intervene between the two objects of a low applicative construction, but

may precede both internal arguments in the prepositional-dative construction:

(130) a.   * The secretary sent **out** [the stockholders] [a schedule]

    b.   The secretary sent [the stockholders] **out** [a schedule]

    c.   * The secretary sent [the stockholders] [a schedule] **out**

(131) a.   I sent **out** [a schedule] [to the stockholders]

    b.   I sent [a schedule] **out** [to the stockholders]

Both of these sets of facts seem to point toward structures in which the two internal arguments

are further apart in low applicatives than they are in the prepositional-dative construction. The

applied object is apparently so structurally high in the low applicative that it must precede

Chinese _liang ci_ 'twice' and English postverbal particles; this seems not to be true in the

prepositional-dative construction, where the DP argument may remain in a structurally low

position, following the adverbial elements.

Baker and Collins (to appear) discuss the behavior of multiple VP-internal DPs in

Kinande, Ju│'hoansi, and ǂHoan. In what follows I will concentrate on the Kinande facts.

Kinande has a morpheme which Baker and Collins refer to as the 'linker' (which I will gloss LIN), which must appear when the VP contains multiple DPs:

(132) a. Kambale a- seng -er -a ehilanga **hy'**- omwami

Kambale 1S/T pack APPL FV peanuts.19 **LIN.19** chief.1

'Kambale packed peanuts for the chief'

   b. Kambale a- seng –er -a omwami **y'**- ehilanga

Kambale 1S/T pack APPL FV chief.1 **LIN.1** peanuts.19

'Kambale packed peanuts for the chief'

The linker agrees with the preceding DP in noun class. Although the two objects after the verb may be in either order, the linker must appear between them:

(133)   * Kambale a- seng -er -a ehilanga omwami **yo**

Kambale 1S/T pack APPL FV peanuts.19 chief.1 **LIN.1**
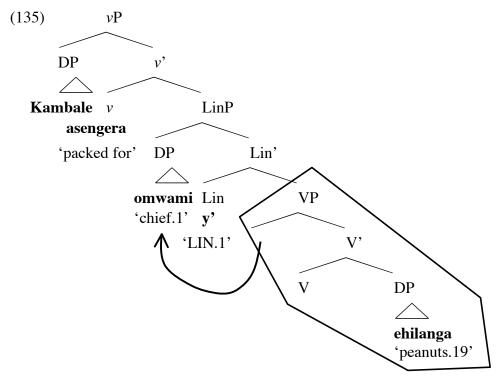
'Kambale packed peanuts for the chief'

Moreover, a linker cannot appear unless there are multiple VP-internal DPs:

(134) a. Kambale a- hek -er -a omwami **y'** obwabu

Kambale 1S/T carry APPL FV chief.1 **LIN.1** drink.14

'Kambale carried drink for the chief'

   b. Kambale a- hek -a (*y') obwabu (*bo)

Kambale 1S/T carry FV **LIN.1** drink.14 **LIN.14**

'Kambale carried drink'

Baker and Collins explain these data by depicting the linker as a functional head above VP, which attracts one of the VP-internal DPs to its specifier and agrees with it in noun class. A vP like the one in (132b) then has something like the following structure:

(135)

When the VP contains two DPs, then, one must move out to a higher position. Linkers do not appear when the *v*P contains only one DP:

(136)   Omukali   mo- a-   h   -er   -u   -e   eritunda (*__ryo__) na Kambale

woman.1 AFF 1S/T give APPL EXT PASS fruit.5   __LIN.5__ by Kambale

'The woman was given fruit by Kambale'

In (136), the other *v*P-internal phrase is a PP, and the linker cannot be used. If we are willing to regard Lin as a phase head, then we can view the movement operation in (135) as Distinctness-driven; it allows us to keep the two DPs in separate phases. Like several of the Distinctness-avoiding mechanisms we have seen in this paper, LinP appears to be a last-resort mechanism, appearing only when needed to fix a structure.

There are two types of phrases in Kinande which complicate this picture in interesting ways. The first are locative expressions, and the second are a class of nominals with nonspecific indefinite interpretations.

Baker and Collins argue that locative expressions in Kinande have many but not all of the properties of DPs. They can, for example, trigger subject agreement on the verb in locative inversion:

(137)   Oko-   mesa kw-a-hir -aw   -a ehilanga

LOC.17 table 17S T put PASS FV peanuts.19

'On the table were put peanuts'

On the other hand, they are unlike DPs in several ways, and one of these is that when multiple locative expressions share a vP, a linker is optional:

(138)   Omulume mo- a-   sat   -ire omo-   soko   (**m'**)   omo- nzoga

man.1   AFF 1S/T dance EXT LOC.18 market **LIN.18** LOC.18 bells

'The man danced in the market with bells'

Baker and Collins suggest that locative expressions optionally sport a Case feature; equivalently, in this account, we can say that they may be treated either as PP or as DP.

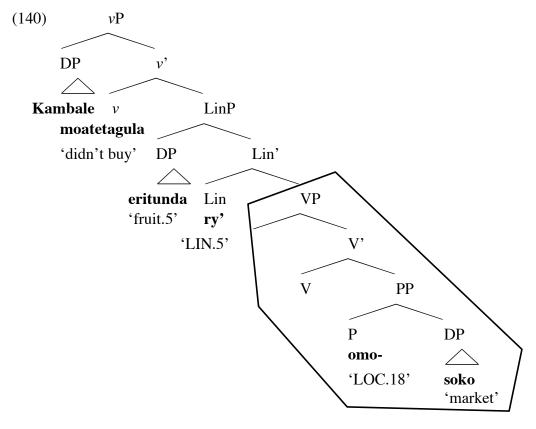Interestingly, however, if a vP contains one DP and one locative expression, a linker is required:

(139)   Kambale mo- a- teta-   gul -a   eritunda *(**ry'**) omo-   soko

Kambale AFF 1S NEG.PAST buy FV fruit.5   **LIN.5** LOC.18 market

'Kambale didn't buy the fruit in the market'

The linker in (139) ought to be required on our theory, as long as the locative expression is not a phase when interpreted as a PP:

(140)

```
                    vP
          ┌─────────┴─────────┐
         DP                    v'
         ╱△╲            ┌──────┴──────┐
      Kambale          v              LinP
      moatetagula               ┌─────┴─────┐
      'didn't buy'  DP                      Lin'
                   ╱△╲            ┌──────────┴──────────┐
               eritunda  Lin                            VP
               'fruit.5'  ry'                    ┌───────┴───────┐
                        'LIN.5'                  V               V'
                                                          ┌──────┴──────┐
                                                          V             PP
                                                                 ┌──────┴──────┐
                                                                 P            DP
                                                                omo-          ╱△╲
                                                                'LOC.18'     soko
                                                                            'market'
```

If the PP *omo-soko* 'in the market' is not a phase, then the tree in (140) has a potential Distinctness violation within *v*P: the DP *eritunda* 'fruit' asymmetrically c-commands the DP *soko* 'market'. Movement of the DP *eritunda* 'fruit' to the specifier of LinP therefore saves the structure from a potential Distinctness violation.

The other class of expressions in Kinande which are of interest to us here are a type of narrow-scope indefinite. All of the DPs discussed so far begin with an initial vowel which Baker and Collins refer to as the 'augment'. Augmented and augmentless nominals receive different interpretations:

(141) a.   Kambale mo- a- teta-   gul –a   **e** -ri-tunda

               Kambale AFF 1S NEG.PAST buy FV **AUG** 5 fruit

               'Kambale did not buy the/a certain fruit'

      b.   Kambale mo- a- teta-   gul –a ri-tunda

               Kambale AFF 1S NEG.PAST buy FV 5 fruit

               'Kambale did not buy a/any fruit'

Baker and Collins regard the augment as a functional head D. In double object constructions, if both objects are augmentless, no linker can appear:

(142) Si-   n- andisyata-hek -er   -a mu-kali   (*__yo__) ka-tebe

      NEG 1sS FUT   carry APPL FV 1 woman **LIN.1** 12 pail

      'I will not carry any pail for any woman'

Here removal of functional structure avoids a Distinctness violation, a situation familiar to us from section 4.2 above. Just as languages like Japanese, German, Serbian, Croatian, and Russian (sections 3.2-3) distinguish between DPs of different cases, we might hypothesize that the nominals in (142) are Distinct by virtue of their different values for Class. That hypothesis makes the straightforward prediction that a version of (142) with internal augmentless nominals of the same class ought to be ill-formed; at this point, I have not been able to find out whether this prediction is correct.

      Very unexpected, from our perspective, is the fact that a *v*P containing one augmented and one augmentless nominal must have a linker:

(143) Si-   n- andisyata-hek -er   -a o-   mu-kali *(__yo__) ka-tebe

      NEG 1sS FUT   carry APPL FV AUG 1 woman **LIN.1** 12 pail

      'I will not carry any pail for the woman'

Here we may have an instance of the kind of asymmetry discussed in section 4.3 above. The proposal there was that structures in which one node has a subset of the features of another may be unlinearizable; in other words, not only are linearization statements relating identical nodes uninterpretable, but linearization statements relating two nodes, one with a subset of the other's features, might be unlinearizable as well. By hypothesis, the augmentless nominals have full Class features, which allow them to be distinguished from other augmentless nominals. DPs apparently lack these fully specified Class features, and we might try to take advantage of this fact in our explanation of (143). For now, I will leave the account here, hoping to return to these questions in future research.
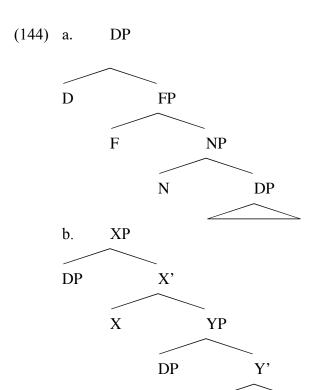
5.   Case, and case resistance

In the course of this paper we have seen Distinctness-based accounts of a number of the effects which are standardly attributed to Case. One difference between Distinctness and classic Case theory is that in the Distinctness approach, DPs are generally assumed to be licensed, unless they are brought unacceptably close to other DPs. In Case theory, by contrast, the default state of a DP is for it <u>not</u> to be licensed, unless it is sufficiently close to a Case-licenser.

In this section we will review the Distinctness-based accounts of certain Case phenomena, and add a few more.

5.1 Techniques for satisfying Distinctness

In the approach developed here, Case-like phenomena have to do with interactions between DPs. We have seen two types of examples in which Distinctness effects may appear: one in which one DP dominates another, and another in which one DP asymmetrically c-commands another within a spell-out domain:
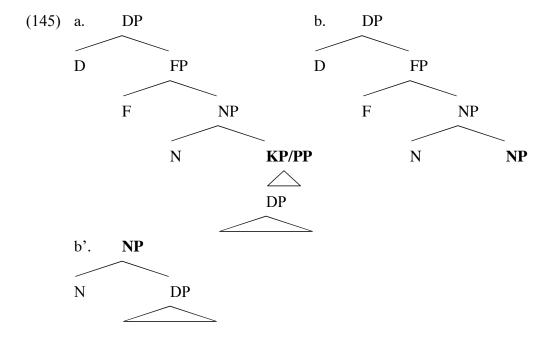
(144) a.   DP

```
        DP
       /  \
      D    FP
          /  \
         F    NP
             /  \
            N    DP
                /__\
```

b.   XP

```
        XP
       /  \
     DP    X'
          /  \
         X    YP
             /  \
           DP    Y'
                /  \
               Y    ZP
```

5.1.1 DP dominating DP

Concentrating first on the dominance case in (144a), we have seen two kinds of ways of avoiding

Distinctness violations. We can add material to one of the DPs, making it a KP or PP, or we can

remove the functional material from one of the DPs, making it an NP. In fact, this second

technique can be applied either to the dominated DP (as in (145b)) or to the dominating one (as

in (145b')):

(145) a.   DP

D   FP

F   NP

N   **KP/PP**

DP

b.   DP

D   FP

F   NP

N   **NP**

b'.   **NP**

N   DP

The strategy in (145a) was the one we used to account for classic Case effects like the ones in

(146):

(146)   a. the destruction *(of) the city

b. su amor *(**a**)l   dinero

his love   to the money

Rather than simply stipulating that nouns are unable to assign Case, we can account for the facts

in (146) by invoking the general principle of Distinctness[25]. We have also seen the strategies in

(145b) and (145b') attested; these were, respectively, Hungarian nominative possessors and

construct state in languages like Hebrew and Irish.

Part of the point of Distinctness is that these Case-driven phenomena are special

instances of a general pattern. The strategies in (145) for linearizing structures with one DP

dominated by another are used for possessors and noun complements, but also for relative clause

---

[25] In order to capture the classic stipulation that adjectives are also unable to assign Case (thus accounting for *fond
(of) cheese), we would need to posit some functional head F which DPs and APs have in common in their extended
projections.

operators, as we have seen. (145a) is the strategy discussed in section 2.2.2, in which relative

operators are required to be PP rather than DP[26]; (145b'), as we saw in section 4.2.3, is also

attested, in languages like Akkadian which have the option of using Construct State to license

relative clauses. We might also attribute to strategy (145a) the use of genitive subjects in relative

clauses in many languages:

(147) a. hu-me [**em**   bič-ka   -'u   -m] sahak   [*Hiaki:* Krause 2001, 43]

the PL **2.sg.GEN** see PERF REL PL leave.PL.PERF

'the ones who you saw left'

b. [**mini** aw-sen]   mer^y-min^y [*Dagur*: Hale 2002, 109]

I.GEN buy PAST horse 1.SG

'the horse that I bought'

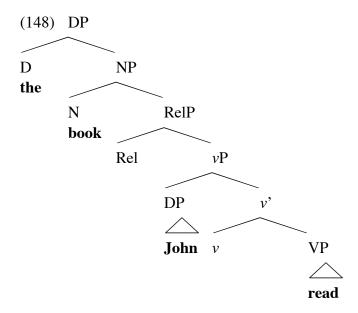c. [**John-no** yonda] hon   [*Japanese*]

John GEN read   book

'the book that John read'

Krause (2001) offers arguments that relative clauses of this type are invariably reduced relatives,

lacking a CP layer and possibly some other functional structure as well. If she is correct, then

the subject of such a reduced relative will be in the same phase as the functional material of the

head DP. I will avoid here assigning a particular label to the functional structure of the reduced

relative, labelling it RelP:

---

[26] On the other hand, I do not know of clear examples of languages in which relative clause operators are rescued by giving them Genitive case. If this is a real gap, then it needs an explanation. One explanation would keep the mechanics of Case-checking as developed in Minimalism, ruling out Genitive case assignment to an A-bar moved phrase, via whatever mechanism rules out improper movement. The traditional mechanics of Case-checking would not be superseded by Distinctness, on this view; we would simply have an explanation for why Case-checking is necessary.

(148) DP

```
       DP
      /  \
     D    NP
   the   /  \
        N    RelP
      book  /   \
          Rel    vP
               /    \
             DP      v'
            / \     /  \
          John  v    VP
                     △
                    read
```
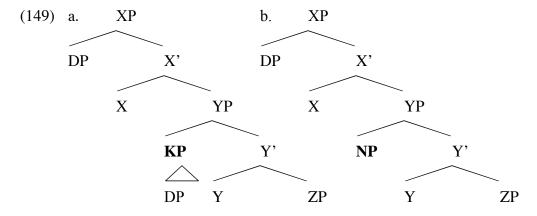
Since (following Krause) the CP phase of the relative clause is missing, the DP *John* and the D

the are in the same phase in (148). We expect to see the same type of interaction between the

higher D and the embedded DP that we have in the other cases reviewed in this section, and this

seems to be the correct result; *John* in (148) must be made into a KP to prevent a Distinctness

violation. Again, the general expectation of Distinctness is that we should not expect to see these

phenomena only when DPs are in feature-checking or selectional relations with each other; any

case of structural proximity between DPs should be handled in this way[27].

5.1.2 DP c-commanding DP

Turning to the structure in (144b), in which one DP c-commands another, we found the same

types of remedies for Distinctness violations; we can either add material to one of the DPs,

making it into a KP, or remove the offending functional material, making one DP into an NP:

---

[27] Since the conditions on DP-internal DP arguments and on relative clause operators have the same source in this account, we make certain predictions about the strategies languages will use to deal with them. For instance, languages like the ones described in section 2.2.2, which ban DP operators in relative clauses, ought to invariably be languages like English and French, which do not distinguish between DPs of different cases as far as linearization is concerned: languages which do distinguish between DPs of different cases, like German and Japanese (discussed in sections 3.2-3) ought to be able to distinguish the relative operator from the DP of the head noun.

(149) a.   XP   b.   XP
          ╱   ╲   ╱   ╲
       DP   X'   DP   X'
                ╱   ╲   ╱   ╲
             X   YP   X   YP
                     ╱   ╲   ╱   ╲
                  KP   Y'   **NP**   Y'
                  ╱╲   ╱   ╲   ╱   ╲
               DP   Y   Y   ZP   Y   ZP

The first of these options is the one represented by differential Case marking (section 2.1.2), and

the second was the one we found in Chol (section 4.2.1), and perhaps in other cases of

incorporation and pseudo-incorporation (Baker 1988, Massam 2001, and much other work).

Much work on morphological Case crucially associates Case with the presence of

multiple DPs; this is the idea of the Dependent Case approach (Massam (1985), Marantz (1991),

Harley (1995)) and of Bittner and Hale's (1996) notion of Case-competitors. On this type of

approach, a DP is marked for Case just when there is another DP in the structural vicinity. The

difference between nominative/accusative and ergative/absolutive languages has only to do with

which of the two arguments in a transitive sentence is made into a KP; nominative/accusative

languages Case-mark their objects, while ergative/absolutive languages Case-mark their

subjects[28].

---

[28] The choice of which argument to make into a KP could be forced in our theory by allowing languages to choose whether K is a phase head or not. The K in (149a) must be a phase head, spelling out its complement DP in a separate spell-out domain. If this instance of K were not a phase head, then linearization would still fail, since there would still be an instance of DP c-commanding DP within the XP phase. Languages which mark the lower of the two DPs (that is, nominative-accusative languages), then, must treat K as a phase head. A K which was not a phase head could still save a structure in which one DP c-commands another, however, as long as it was the higher DP that was made into a KP. The resulting structure would have a KP c-commanding a lower DP, which would be a linearizable structure; here KP need not be a phase head, since the DP dominated by KP is safe from being c-commanded by the other DP. Languages in which K was not a phase head, then, would be forced to be ergative, making the subject rather than the object into a KP.

5.2 Case or not?

An approach based on Distinctness has the virtue of making Case-driven phenomena special

instances of a general pattern; all of the examples in (150) are instances of the same pattern, as

far as this theory is concerned, though only the first is handled by Case theory of the classic type:

(150)   a. the destruction *(of) the city

       b. John was seen *(to) leave

       c. *a man who to dance with

       d. *I know somebody insulted somebody, but I don't know who whom

There are a number of morphological alternations that have become the center of controversy

over whether they involve Case or not. Tagalog and other languages of the "Philippine type"

exhibit one example of this:

(151)   a.   Nagbigay ang magsasaka ng bulaklak sa kalabaw

              NOM-gave ANG farmer NG flower SA water.buffalo

              'The farmer gave a flower to the water buffalo'

       b.   Ibinigay ng magsasaka ang bulaklak sa kalabaw

              ACC-gave NG farmer ANG flower SA water.buffalo

              'A farmer gave the flower to the water buffalo'

       c.   Binigyan ng magsasaka ng bulaklak ang kalabaw

              DAT-gave NG farmer NG flower ANG water.buffalo

              'A farmer gave the water buffalo a flower'

Tagalog sentences with multiple arguments typically exhibit alternations of this kind, in which

morphology on the verb picks out one of the arguments, which is then marked with a special

morpheme *ang*; DPs not marked with *ang* are marked with *sa* if Dative, or *ng* otherwise[29]. The alternations have invited analysis in terms of Case, with the different verb forms being treated as different 'voices' and *ang* being a marker of Nominative (or Absolutive) case; this was the account in Bloomfield (1917), for example. The difficulty with this type of analysis, as much research has shown, is that the alternations in (151) seem not to involve movement of the type classically associated with Case; if anything, the movements involved seem to be A'-movement (Schachter 1976, 1996, Guilfoyle, Hung, and Travis 1992, Richards 1993, 2000, Rackowski 2002, Aldridge 2004, and references cited there). Much debate in the Austronesian literature has therefore focused on the question of whether these alternations are 'really' associated with Case or not.

Distinctness allows us to short-circuit this type of debate, to some extent. The alternations in (151) may be like Case in that they are arrangements of functional heads designed to make structures linearizable. On the other hand, we have seen that a number of phenomena are driven by Distinctness in this way, including phenomena that have not classically been handled by Case theory. Both sides of the debate over alternations like those in (151) can therefore claim victory; the morphology shares properties with Case morphology, but need not be identical to it syntactically.

A similar issue arises with Algonquian obviation morphology. In the Algonquian languages, sentences containing multiple third person arguments[30] make a distinction among the arguments based on their roles in the discourse: one argument is required to be *proximate* (proximate arguments are, roughly, those which refer to the topic of discussion or "point of view" of the discourse) and all the others are marked as *obviative*:

---

[29] Proper names of people have a different set of markers: the proper-name versions of *ang*, *sa*, and *ng* are *si*, *kay*, and *ni*, respectively.

[30] In some Algonquian languages (such as Wampanoag) obviation is limited to animate arguments.

(152) a.   Washkeetôp nâw-âw mashq-ah   [*Wampanoag*]

               man   sees DIR bear   OBV

               'The man (topic) sees a bear'

      b.   Washkeetôpâ-ah   nâw-uq   mashq

               man   OBV see INV bear

               'A man sees the bear (topic)'

Possessed noun phrases, however, exhibit different behavior: the possessed noun must be marked obviative, and the possessor must be treated as proximate, regardless of the status of the referents of these nouns in the discourse:

(153)   washkeetôp wu-hshum   -ah

           man   3   daughter-in-law OBV

           'the man's daughter-in-law'

Here we have another type of morphology which shows signs of being driven by Distinctness; in (152), the requirement apparently is that a functional head of a particular type be attached to one or the other of the two DPs, and in (153) the same morphology is used to separate a possessor from the possessee. Traditionally, the literature on Algonquian does not refer to this morphology as 'Case', perhaps partly because of its discourse effects. Here, again, we have a type of morphology that has properties in common with case morphology as we traditionally understand it, but may not be completely equatable with case. And again, Distinctness allows us to untangle the problem somewhat; like Case, obviation fixes potential Distinctness violations, but this role for obviation may not predict anything about its other syntactic properties.

5.3 Case resistance

Much of classic Case theory appears to follow from the general principle of Distinctness. A version of Stowell's (1981) Case Resistance Principle may be made to follow as well. The Case Resistance Principle is meant to account for facts like (154):

(154)   *They're talking about [that they need to leave]

The ill-formedness of (154) might be another case of Distinctness, if we assume that prepositions and complementizers have something in common (perhaps not an unreasonable assumption, given the frequency with which prepositions are used as complementizers cross-linguistically). Consider this tree for part of (154):

(155)

```
              PP
          ┌────────┐
         P          CP
       about     ┌──────┐
                C        TP
              that    ┌──────┐
                    they need to leave
```

Recall that CP is a strong phase. When the phase above CP is spelled out, then, the nodes to be linearized will include P (*about*), C (*that*), and CP (*that they need to leave*). These nodes cannot be linearized; <P, C> is ruled out by Distinctness, if P and C are effectively the same.

Note that the Case Resistance Principle does not apply to interrogative clauses:

(156)   They're talking about [what they should buy]

This is arguably related to the fact that such clauses behave as nominals when they are complements of nominals, in that they require *of* to be inserted[31]:
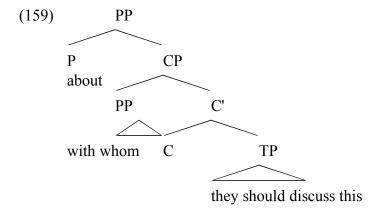
---

[31] It is tempting to try to account for the failure of Case Resistance with interrogative clauses in terms of Distinctness; we might say, for example, that the wh-phrase intervenes between the higher P and the lower C. Such an account would be difficult to reconcile with the theory as it has been developed so far, however; as Distinctness is currently formalized, a specifier between two heads does not relevantly intervene between them (see section 3 above for evidence for this conclusion). The requirement of *of*-insertion in (44) would also be mysterious for such an

(157)   the question *(**of**) [what they should buy]

Interestingly, Case Resistance effects seem to resurface in interrogatives when the wh-phrase is a PP. (158a) is somewhat stuffy-sounding in my dialect, but (158b) is ill-formed (and, I think, worse than (158c), suggesting that this is not simply a contrast of main clauses vs. embedded clauses):

(158)   a. [With whom] should we discuss this?

b.*They're talking about [with whom they should discuss this]

c. They don't know [with whom they should discuss this]

The contrast in (158) is expected, again; in (159b), the P *with* and the PP *with whom* cannot be linearized:

(159)
```
              PP
           /      \
        P          CP
      about      /     \
             PP         C'
            /  \       /   \
      with whom  C      TP
                      /     \
                they should discuss this
```

Here the objects to be linearized in the phase above CP include P (*about*) and PP (*with whom*). These cannot be linearized, since linearizing them would involve an ordering statement <P, P>. The account is the same as that of the conditions on relative clauses developed in section 2.2.2:

(160)   a.   a man [with whom to dance]

b.   * a man [who to dance with]

---

account (it does not seem to be related to an interaction between the D-feature of the wh-phrase and the D of the higher NP, since even adverbial wh-phrases, which presumably lack a D-feature, require *of* here)

(160b) is ruled out because movement of *who* so close to the functional projections associated with the head noun creates a Distinctness violation; essentially, (160b) involves movement of a DP too close to another DP. The account of (158b) is the same; this example is ill-formed because a PP is brought too close to another PP.

Parts of Case theory, along with Case resistance, then, can be made to follow from Distinctness. The residue of Case theory is its role in forcing DPs to move to particular positions in the tree, as in passives and raising constructions. Much work (cf. Marantz 1991, Schütze 1997) has explored the idea that these movement operations have nothing to do with Case per se, but are simply the result of general EPP requirements that can be filled by DPs in many cases. If DPs do have some special status for these movements, that fact still remains to be explained.

6. Conclusion

Because clauses often contain multiple DPs, Distinctness-related constraints on the relations between these DPs have often been observed, and codified in the form of Case theory. One claim of this paper has been that Case theory is a special case of a more general theory. In particular, facts like the one in (161a), which form part of the classical motivation for Case theory, are special instances of a more general condition which is not limited to DPs (161b), nor is it crucially associated with A-movement (161c):

(161)   a. the destruction *(of) the city

  b. John was seen *(to) leave

  c. *I know somebody insulted somebody, but I don't know who whom

The more general principle of Distinctness, defended in this paper, bans Spell-out domains containing more than one node of the same kind in an asymmetric c-command relation. Such

pairs of nodes will force the creation of linearization statements of the form $\langle \alpha, \alpha \rangle$, which are uninterpretable and cause the linearization process to crash.

We have seen that defining the notion of 'same kind' of node is not completely trivial, and can be a point of cross-linguistic variation. In particular, some languages (like English) invariably treat DPs as being nodes of the same kind, while others (like German and Japanese) assign different kinds to DPs with different values for case or animacy. I have suggested that linearization statements make reference to feature bundles associated with particular nodes, and that these feature bundles can vary in their richness from language to language. The extent of this variance, and its consequences for other domains of grammar, is a topic for future work.

We have seen that in many cases, a potential Distinctness violation may be avoided in any of several ways, including removing offending structure, adding additional structure to insert a phase boundary between identical nodes, blocking movement operations which would create violations, or forcing movement operations which break up ill-formed structures. I have had nothing to say about why particular languages choose particular options among these; why do some languages have construct state, for example, and others not? I will have to leave this as a topic for future work as well.

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