

**Lardil “Case Stacking”
and the Structural/Inherent Case Distinction**

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February, 2007

It seems to be cross-linguistically fairly common for morphology added to DPs that are already inflected for Case to interact in different ways with structural and inherent case morphology.

Such morphology is often required to replace structural case morphemes, while DPs with inherent case either cannot receive the morphology at all or simply add it on top of the existing inherent case morpheme.

The Japanese Topic marker *wa* offers one instance of this. It obligatorily replaces Nominative or Accusative case, but occurs freely after other case morphemes and postpositions:

- (1) a. Taroo-(*ga/o) -wa
Taroo NOM/ACC TOP
- b. Taroo-(ni/ kara) -wa
Taroo DAT from TOP

Russian Genitive of Negation behaves in an arguably similar way. Genitive of negation replaces structural case morphology (Nominative, Accusative) on the DPs to which it is applied, while it cannot affect DPs with inherent case (Pesetsky 1982, Babyonyshev et al 2001, Partee and Borschev 2006):

- (2) a. Anna pišet pis'mo rukoi
 Anna writes letter.ACC pen.INSTR
 'Anna is writing a letter with a pen'
- b. Anna ne pišet pis'ma rukoi
 Anna not writes letter.GEN pen.INSTR
 'Anna isn't writing a letter with a pen'

This paper will consider data from Lardil, an endangered non-Pama-Nyungan language from the Tangkic family of northern Australia. Like its relative Kayardild (Evans 1995), Lardil has a number of processes of Case concord, and allows nominals to surface with multiple case morphemes attached to them:

- (3) Ngada latha karnjin-i marun-ngan-ku maarn-ku
 I spear wallaby-ACC boy-GEN-INSTR spear-INSTR
 'I speared the wallaby with the boy's spear'

In (1), the DP *marunnganku* 'boy-GEN-INSTR' is inflected both for Genitive and for Instrumental case, reflecting its status as the possessor of the Instrumental nominal *maarnku* 'spear-INSTR'.

A number of works (cf. Babby 1984, McCreight 1988, Bejar and Massam 1999, Yoon 2004, and references cited there) focus on examples in which case morphology is assigned to a nominal more than once. For the most part, this literature concentrates on examples in which multiple case would be assigned by movement of a DP from one Case-marked position to another, and in which not all of the assigned morphology can surface. The data discussed here will mainly come from Lardil's Case-concord processes. Because Lardil allows us to 'stack' nominal inflection comparatively freely, we can investigate the conditions on case morphology

particularly carefully. I will argue that the Lardil facts lead us to the following conclusions about Case:

- (4) a. Case morphology may be assigned to a DP arbitrarily many times.
- b. If a Structural Case morpheme is to appear,
it must be on the periphery of the DP's inflection.

Section 1 will describe the Lardil facts and defend the conclusions in (4). Section 2 will turn to the question of why (4b) should be true.

As the examples discussed above have already shown, not all of the morphemes considered here will be ones traditionally referred to as 'case morphology'. In the end, I will argue for certain conditions on the checking of Case features, but the investigation of these conditions will involve the interaction of Case with other types of morphology. I will simply use the term 'nominal morphology' to refer to this more general class of morphemes, including both Case and such morphology as Japanese Topic and (as we will see) Lardil Tense.

This paper will concentrate exclusively on what is sometimes called "morphological Case", to be distinguished from the "abstract Case" or "licensing" which is partly responsible for determining the distribution of overt DPs in the sentence (for discussion of the distinction, see Marantz 1991, Harley 1995, Schütze 1997, Bobaljik 2006, Legate to appear). I will have nothing to say about the nature of this second type of requirement. I will claim, contra some of the work in this area, that "morphological Case" must involve features which are manipulated in the narrow syntax.

1. Lardil¹

Lardil is a nominative-accusative language:

¹ Lardil data, where not otherwise noted, are from Ken Hale's field notes, or from my own fieldwork. Many thanks to †Ken Hale, †Kenneth Jacobs (Kulthangarr), Lindsay Roughsey (Burrurr), and Cyril Moon (Birdibir) for their help with the Lardil facts.

- (5) a. Marun ngeerne.
 boy.NOM sleep
 ‘The boy is sleeping’
- b. Bidngen kurri marun-i.
 woman.NOM see boy-ACC
 ‘The woman sees the boy’

When a DP is inflected for Case, all of the constituents of the DP bear Case morphology:

- (6) Ngada latha diin-i mutha-n karnjin-i
 I spear this-ACC big-ACC wallaby-ACC
 ‘I speared this big wallaby’

When the verb is inflected for tense, tense morphology appears on all the constituents of the verb phrase. There are two possible tense inflections, one for future² and another, referred to by Hale (1997) as the ‘marked non-future’, which appears in certain non-future adjunct clauses (including temporal adjuncts and relative clauses). I will concentrate on the future form in what follows.

² It is possible that ‘future’ is a bad name for this category, which seems to be a more general irrealis form; in particular, modals are uniformly translated with the ‘future’ tense:

(i) Ngada ji-thur yak-ur
 I eat-FUT fish-FUT
 ‘I will/want to/should/can eat the fish’

I will continue to refer to this morphology as ‘future’ in what follows, however.

- (7) a. Ngada nguthungu warnawu dulnhuka-n beerr-u nyith-u
 I slowly cook month.fish-ACC ti-tree-INSTR fire-INSTR
 ‘I slowly cooked the month fish on a fire of ti-tree wood’
- b. Ngada nguthunguthu-r warnawu-thur dulnhuka-r beerr-uru-r nyith-uru-r
 I slowly-FUT cook-FUT month.fish-FUT ti-tree-INSTR-FUT fire-INSTR-FUT
 ‘I will slowly cook the month fish on a fire of ti-tree wood’

Of interest in (7b) is the behavior of the future suffix on the non-verbal elements. It attaches to the adverb *nguthungu* ‘slowly’ and to the instrumental phrase *beerru nyithu* ‘with a fire of ti-tree wood’ simply by attaching to the end of each word³. When it attaches to the direct object, however, the Accusative suffix *-n* disappears, replaced by the Future suffix *-r*. This is not for phonotactic reasons; the future suffix has an allophone *-kur* which regularly appears after words ending in *n*:

- (8) Ngada lenji-thur yarraman-kur
 I buy-FUT horse-FUT
 ‘I will buy a horse’

Thus, there is no phonotactic reason that a Future suffix *-kur* could not be added to the Accusative-marked *dulnhukan*.

Lardil Future, then, has properties in common with phenomena like the Russian Genitive of Negation; it replaces Accusative case, but not Instrumental case:

³ Lardil has a general process of word-final truncation (see Hale 1973, 1997, Wilkinson 1988 for discussion), and adding the Future suffix has the consequence of restoring material which would otherwise be truncated; the adverb *nguthungu* ‘slowly’, for example, actually has the stem *nguthunguthu*, and the final syllable of this stem reappears in (7b) when the Future suffix is added. Similarly, the Instrumental suffix is actually *-uru*, with the final *ru* truncated in (7a) but reappearing in (7b).

- (9) a. Anna pišet pis'mo rukoi
 Anna writes letter.ACC pen.INSTR
 'Anna is writing a letter with a pen'
- b. Anna ne pišet pis'ma rukoi
 Anna not writes letter.GEN pen.INSTR
 'Anna isn't writing a letter with a pen'

Of course, there are differences between Lardil and Russian; Russian, unlike Lardil, cannot put Genitive morphology on adverbs, or on DPs which are already case-marked. These are plausibly morphological differences between Lardil and Russian, possibly irrelevant to the syntax (though see section 2.3 for more discussion). Other differences between Lardil and Russian seem more syntactic in nature; I discuss these facts in section 2.4.

In general, the ordering of the affixes on Lardil nominals is predictable from the syntax; affixes associated with lower Probes are attached earlier, and hence closer to the nominal. We have already seen that the Case of a DP appears on everything dominated by DP⁴. A consequence of this case concord is that the possessor of a noun will be marked for the same case as the noun itself, as well as for Genitive case:

⁴ There are in fact certain exceptions to this; in particular, although a possessor typically receives the Case of its head noun, the possessor of a possessor does not:

- (i) a. Nyingki derlde marun-ngan-i wangalk-i
 you break boy -GEN-ACC boomerang-ACC
 'You broke the boy's boomerang'
- b. Nyingki derlde marun-ngan thabuji -kan-i wangalk-i
 you break boy -GEN older.brother-GEN-ACC boomerang-ACC
 'You broke the boy's older brother's boomerang'

The most deeply embedded possessor in (ib) receives only the Genitive case it is presumably assigned by virtue of being a possessor, not the Genitive case of the immediately dominating DP, or the Accusative case of the higher DP (thus, it surfaces as *marunngan* 'boy-GEN', not as **marun-ngan-ngan-i* 'boy-GEN-GEN-ACC'. The fact that the DP cannot receive two instances of Genitive case in a row is perhaps not so surprising, and might be handled by some ban on multiple featurally identical morphemes, not unlike the OCP. The fact that the higher ACC fails to spread to the most deeply embedded possessor apparently tells us that this copying process cannot 'skip' cases; because the Genitive is not copied to the most deeply embedded possessor, no higher cases can be copied either. See section 2.3 for a mechanism which would have this effect.

- (10) a. Ngada kurri marun-ngan -i kantha-n
 I see boy -GEN -ACC father -ACC
 ‘I saw the boy’s father’
- b. Ngada kurri-thur marun-ngan-kur kantha-r
 I see -FUT boy -GEN -FUT father-FUT
 ‘I will see the boy’s father’

The Genitive case marker appears on the possessor first, followed by the case of its possessee. Presumably, this is related to the fact that Genitive case is assigned to the possessor by some DP-internal head, and thus earlier than Accusative case or Future marking, which must come from DP-external heads. We can view these case morphemes as simply being concatenated as they are assigned.

Lardil control constructions offer another instance of case stacking. In such examples, the case of the controller spreads to the control clause. The examples in (11) demonstrate this, taking advantage of the fact that in Lardil, 3rd person objects of imperatives are nominative:

- (11) a. Ngada kangka niween were-thuru-Ø wangalk-uru-Ø
 I tell him.ACC throw-FUT-ACC boomerang-FUT-ACC
 ‘I told him to throw the boomerang’
- b. Kangka niya were-thur wangalk-ur!
 tell him.NOM throw-FUT boomerang-FUT
 ‘Tell him to throw the boomerang!’

In (11a), the Accusative case of the controller is spread to the embedded clause, while in (11b), the controller is Nominative, and this case is spread. Here, again, the order of affixes is straightforwardly as expected. The embedded clause is marked for future tense, which

contributes the first affix to the verb and its object; the second affix is determined by the case features of the controller, which are not determined until the matrix clause is reached.

Examples like the ones in (11) show that a structural case (like Nominative or Accusative) may be attached to a DP which already bears nominal morphology (like the Future morpheme attached to the object in (11)). We also saw, previously, that a noun may end in two morphemes when the first is an inherent Case, as in the examples in (7) of Future spreading to Instrumental-marked nouns ((5b) is repeated here as (12)):

- (12) Ngada nguthunguthu-r warnawu-thur dulnhuka-r beerr-uru-r nyith-uru-r
I slowly-FUT cook-FUT month.fish-FUT ti-tree-INSTR-FUT fire-INSTR-FUT
'I will slowly cook the month fish on a fire of ti-tree wood'

On the other hand, (12) also shows us that when Future is added to a noun that might be expected to have a structural case already attached, the structural case does not appear; the direct object in (12) has only the Future suffix, not (as we might expect) the Accusative suffix followed by the Future suffix.

We could imagine a number of ways of modelling the interaction between Accusative and Future in (12). For instance, we might allow the Future tense marker to somehow disrupt Accusative case assignment, guaranteeing that Accusative is not assigned in examples like (12). Alternatively, we might allow Accusative to be assigned, but require it to be erased once Future is assigned to the same nominal.

In fact, Lardil offers evidence that the second of these approaches is to be preferred.

Lardil relative clauses agree with their head noun in Case:

- (13) a. Kara nyingki kurri kiin-i thungal-i, ngithun-i kirdi-thuru-Ø?
 Q you see that-ACC tree-ACC I.GEN-ACC cut -FUT -ACC
 ‘Do you see that tree, which I am going to cut down?’
- b. Kurri-wala kiin thungal, ngithun kirdi-thur.
 see just that-NOM tree-NOM I.GEN cut-FUT
 ‘Just look at that tree, which I am going to cut down.’

The relative clauses in (13) both exhibit something akin to Japanese *ga-no* conversion, in that the subject of the relative clause is in the genitive case. In (13a), in which the head of the relative clause is Accusative, this Accusative case also appears on both the subject and the verb of the relative clause (following more locally determined affixes like Genitive and Future, as we expect). In (13b), in which the imperative verb puts its object in the Nominative case, the relative clause does not receive this Accusative suffix.

When we consider relative clauses modifying direct objects of future verbs, we get an interesting result; the morphology that spreads to the relative clause is not Future, but Accusative (Hale 1997, 44):

- (14) Ngada kurri-thur karnjin-kur [ngithun thabuji -kan -i la -tharrba -Ø]
 I see -FUT wallaby-FUT my o.brother-GEN-ACC spear-NONFUT-ACC
 ‘I want to see the wallaby that my older brother speared’

We can account for the morphology in (14) by positing a derivation in which the direct object of the main clause is Accusative at some point in the derivation. The derivation would go as follows; first, the direct object is introduced, along with the relative clause modifying it. The direct object’s Case is then determined as Accusative, and this Accusative is spread to the relative clause. Later, when Tense is Merged, Future marking is attached to the direct object,

wiping out the Accusative which was originally present. The relative clause is unaffected by Tense spreading, for some reason, and therefore continues to bear Accusative case.

2. Structural case, inherent case, and the timing of Spellout

We have seen that Russian, Japanese, and Lardil all have nominal morphology with a common property; it must replace structural cases, but leaves non-structural cases untouched, either attaching after them or failing to attach at all:

(15) a. Anna pišet pis'mo rukoi

Anna writes letter.ACC pen.INSTR

‘Anna is writing a letter with a pen’

b. Anna ne pišet pis'ma rukoi

Anna not writes letter.GEN pen.INSTR

‘Anna isn’t writing a letter with a pen’

(16) a. Taroo-(*ga/o) -wa

Taroo NOM/ACC TOP

b. Taroo-(ni/ kara) -wa

Taroo DAT from TOP

(17) a. Ngada latha liban-i kurrumbuwa-r

I spear pumpkinhead -ACC multi.pronged.spear -INSTR

‘I speared the pumpkinhead with a multi-pronged spear.’

b. Ngada la-thur liban-kur kurrumbuwa-ru-r

I spear-FUT pumpkinhead -FUT multi.pronged.spear -INSTR-FUT

‘I will spear the pumpkinhead with a multi-pronged spear.’

Russian genitive of negation, Japanese topic-marking, and Lardil future spreading all replace Accusative case; we have seen evidence from Lardil, moreover, which shows that Accusative case is in fact assigned to the DPs in question, and subsequently removed when more morphology is added. DPs with non-structural cases, by contrast, either cannot host other morphology at all (as in Russian), or the new morphology is “stacked” outside the non-structural case (as in Japanese and Lardil). How should we account for this distinction between structural and non-structural case?

Let us begin with structural case. Structural case features are generally assumed to be uninterpretable. In this context, “uninterpretable” means “uninterpretable at the LF interface”; such features presumably do make a contribution at the PF interface, where they are represented as case morphology.

Now, suppose that PF Spellout and LF Spellout need not occur at the same time. Since a DP with a structural case feature has an uninterpretable feature for LF, but not for PF, it could safely undergo Spellout to the PF side, as long as this process did not make it impossible to later check off the Case feature. On this account, an Accusative DP, like the direct object in (17a) above, could undergo something like the following derivation:

- (18) a. The DP is Merged into a tree, and eventually assigned Accusative Case, perhaps via Agree with *v*:

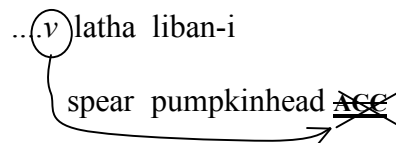
...*v* latha liban-i
 spear pumpkinhead ACC

- b. At this point in the derivation, the DP *liban-i* ‘pumpkinhead-ACC’ (or some piece of structure containing it) can be spelled out to PF:

...*v* latha liban-i → PF
 spear pumpkinhead ACC

- c. Subsequently, the Accusative Case feature is checked and deleted, perhaps again through Agree with *v*:

...*v* latha liban-i
 spear pumpkinhead ~~ACC~~



- d. Finally, the DP undergoes Spellout a second time, this time to LF. The Accusative Case feature, which would be uninterpretable at LF, has been safely deleted.

This derivation crucially draws a distinction between PF Spellout and LF Spellout, and also between Case assignment (which adds a Case feature to a DP), and Case checking (which eliminates the Case feature). In the derivation, PF Spellout precedes Case-checking, which in turn precedes LF Spellout. We might imagine that Spellout takes place as early as possible; since the checked feature is uninterpretable at LF but not at PF, Case-checking must precede LF Spellout, but need not precede PF Spellout, which is free to take place earlier.

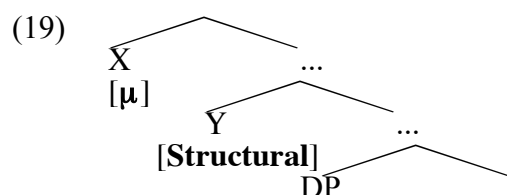
One consequence of this derivation is that the Structural Case feature is quite short-lived; it is introduced just before PF Spellout of the DP, and removed just after Spellout. Another type of derivation, which would have the same consequence, would introduce the Structural Case

feature on the PF branch of the derivation, so that it never appeared in narrow syntax at all (cf. Bobaljik 2006). If we allowed this type of operation to occur after the narrow syntax, then we could simplify the picture of spellout, allowing PF and LF spellout to be simultaneous. I believe that this alternative will come to grief in the next section, however.

2.1 Stacking cases: structural plus inherent

Now consider an example in which a DP with structural Case later becomes the Goal of a higher Probe, and is thereby assigned the features associated with another morpheme.

Abstractly, such a DP would appear in a tree like the one below:



The DP in the tree in (19) is assigned features twice, first by a Structural Case-assigner and later by an assigner of some other feature, μ . For a direct object, for example, Y would be v , while the value of X would vary from language to language; in Lardil, X might be T, assigning Future, while in Russian, X might be Negation, assigning Genitive case, and in Japanese, X might assign the features spelled out as the Topic marker *wa*. As we have seen, this configuration results in the Structural case being assigned but not morphologically represented; one Lardil instance of the DP in (19) would be the direct object *libankur* ‘pumpkinhead-FUT’ below, which bears Future morphology but not Accusative morphology:

- (20) Ngada la-**thur** liban-**kur** kurrumbuwa-**ru-r**
 I spear-**FUT** pumpkinhead -**FUT** multi.pronged.spear -**INSTR-FUT**
 ‘I will spear the pumpkinhead with a multi-pronged spear.’

Now, let us consider the sequence of operations that would create a tree like the one in (19). Suppose, first of all, that PF Spellout of a DP fixes its form, so that no further Case-assignment to that DP is possible. For the tree in (19), then, PF-Spellout of the DP will have to wait until after the higher probe X has Agreed with the DP, if the Future feature is to be morphologically realized as a Future affix. Moreover, considerations of cyclicity tell us that the probe Y will Agree with the DP before the probe X does. We therefore know that about the derivation of (19) involves at least the following three steps in this order:

- (21) a. Probe Y assigns Structural Case to DP.
b. Probe X assigns Inherent Case to DP.
c. DP undergoes PF-Spellout.

At what point in this derivation will the Structural Case be checked? We already know that it must be checked at some point, since it is uninterpretable at LF. Now, if we make the assumption that the head which checks the Structural Case of the DP is the same as the one that assigns the Structural Case⁵, then we can derive a new result; because cyclicity is forcing probe Y to Agree with the DP before probe X does, the Structural Case of the DP will have to be checked off prior to PF-Spellout:

- (22) a. Probe Y assigns Structural Case to DP.
a'. Probe Y checks off and deletes DP's Structural Case.
b. Probe X assigns Inherent Case to DP.
c. DP undergoes PF-Spellout.

⁵ Actually, the account will only require the head that checks off Structural Case to be required by cyclicity to Agree with the DP earlier than Probe X, which assigns Inherent Case. Since we are already assuming that Probe Y is required to Agree earlier than Probe X, it simplifies our account if we assume that Probe Y and the Probe that checks off Structural Case are one and the same, but the account does not logically depend on this assumption.

As a result, Structural Case, though it is assigned to the DP, will not be morphologically instantiated; it is checked off before the DP is sent to PF.

The account developed here incorporates a straightforward instance of look-ahead.

Consider the derivation of the Lardil sentences in (23), with the trees in (24):

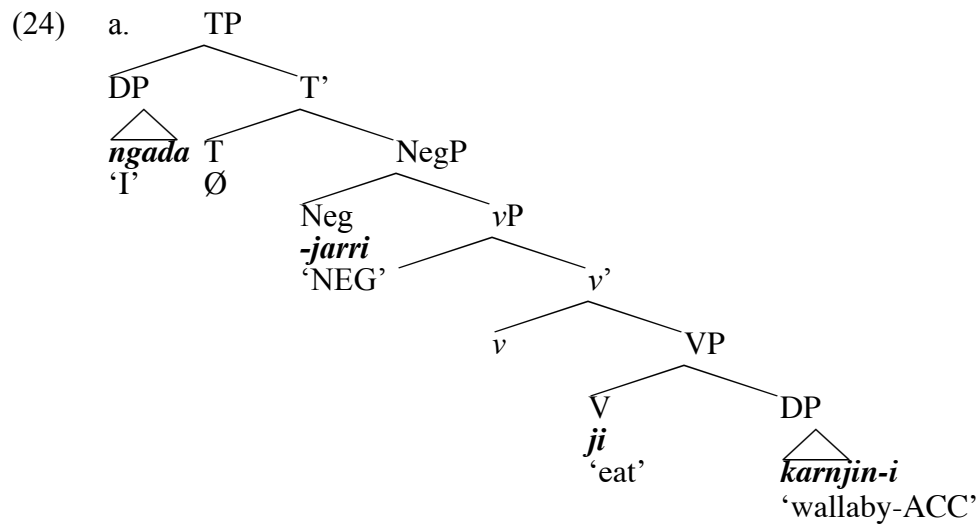
(23) a. Ngada *ji-jarri karnjin-i*
 I eat-NEG wallaby-ACC

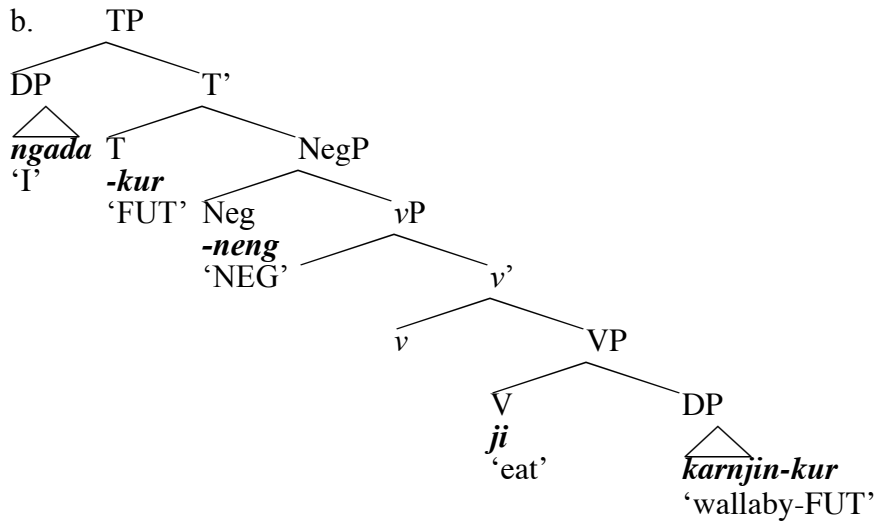
‘I didn’t eat the wallaby’

b. Ngada *ji-neng-kur karnjin-kur*

I eat-NEG-FUT wallaby-FUT

‘I won’t eat the wallaby’





In the account given here, the direct objects of both sentences in (23-24) are first assigned Accusative case by v , and Accusative case is then deleted, again by v . In (24b), the T head later assigns Future morphology to the direct object.

The difference between the two derivations, apart from the difference in Tense heads, has to do with the point of PF-Spellout. In (24a), the DP (or some structure containing it, such as vP) is spelled out after v assigns Accusative case, but before v deletes Accusative case; this is why Accusative case is represented as a morpheme *-i*. In (24b), by contrast, PF-Spellout of the DP takes place after T has been Merged and has assigned a Future feature to the direct object. Since Accusative case has already been checked off and deleted by this point, it is not morphologically instantiated.

The account crucially depends, then, on Spellout of the DP (or a structure containing it) being delayed just when the value of T is Future, so that Future can be assigned to the DP (and, for that matter, to the rest of vP). Crucially, the head assigning Case, on standard approaches to clause structure, is not even the complement of T (this is why I used negated sentences in these examples, to make it clearer that at least a Neg head will have to intervene between T and v).

Although the approach offered here incorporates an instance of look-ahead, it seems to me to be a comparatively innocuous type of look-ahead. The grammar does not need to know anything about future operations, landing sites of movements, relations between particular Probes and particular Goals, etc.; it only needs to know what value of Tense is waiting in the Numeration to be merged in the next phase. It is perhaps relevant that the values of Tense which would require this delay of Spellout in the system developed here are all and only the ones which are morphologically instantiated; the non-future tense which does not assign morphology to the VP-internal constituents is morphologically zero on the verb as well. The Lardil facts could be covered, then, by an account which required PF-Spellout to wait until all the morphology to appear on the verb had been Merged into the tree⁶.

The previous section was concerned with making sure that Structural Case features appeared in the PF representation but not in the LF representation. The mechanism proposed to accomplish this was to allow PF Spellout to precede LF Spellout, and to have the Structural Case features checked off and deleted in the syntax after PF Spellout but before LF Spellout. At the end of the section, I briefly sketched an alternative theory; following Bobaljik (2006), we could allow assignment of the Case features on the PF branch of the derivation, never having them appear in the narrow syntax at all. I will refer to this approach as the “phi-free” approach in what follows, for ease of reference. I said at the end of the last section that the phi-free approach, though it allows us to simplify our understanding of Spellout, would have difficulties with the facts discussed in this section.

⁶ Since negation can appear on verbs with no tense morphology, without affecting Case-marking, making this move would force us to a conclusion along the lines hinted at in footnote 5, in which Case checking on the object is accomplished by a higher head (namely, Neg, or its more neutral counterpart Σ), not by the v which assigns it. If we were to persist in assuming that v both assigns and checks Accusative case, and if we choose a theory of PF Spellout in which Negative verbs delay Spellout until Neg is Merged, then we would falsely predict that Accusative in Negative sentences would always have been checked off by the time PF Spellout took place.

In this section, we have seen that direct objects of Future clauses in Lardil are first assigned Accusative case, and then, after this Accusative case has been deleted, the features that yield Future morphology are assigned. I have suggested that this reflects a delay in PF Spellout, perhaps triggered by a general principle forcing PF Spellout to wait until the verb is morphologically complete.

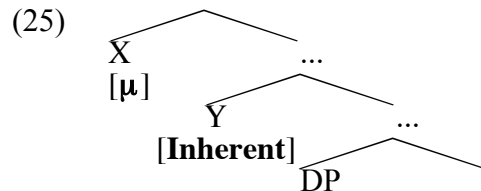
It seems to me that these facts are difficult to accommodate in a theory which does not assign Case features in the narrow syntax. Suppose we simply delay Spellout until T is Merged, as in the non-phi-free approach. The PF branch is then given a structure containing a TP, dominating a ν P, which dominates the direct object. We have seen that the direct object in such a structure does receive Accusative Case, though this Case is not generally morphologically instantiated. Will ν assign Accusative (countercyclically, if that matters on the PF branch) to the direct object? And what will make Accusative vanish, to be replaced by Future morphology? One great attraction of the phi-free approach is that it has no need of an operation to ‘check off’ case features; they do not appear in the narrow syntax because they are never assigned there. To reintroduce case-checking on the PF branch would be a serious step backwards, it would seem. Moreover, it would fail to make one of the distinctions that the theory developed here does make successfully; the cases which ‘vanish’ are just the ones which are uninterpretable at the *LF* interface. Why should PF check off all and only LF-uninterpretable features?

The only phi-free alternative I can see which avoids these problems would be to invariably perform PF Spellout of direct objects with Accusative case, and to allow subsequent Spellout of direct objects with Future morphology to ‘overwrite’ the results of the previous Spellout. This alternative threatens to make the whole notion of Spellout meaningless, so I will reject it out of hand, perhaps unwisely. I will therefore reject the phi-free approach, and continue

to assume that Case features do indeed make an appearance in the narrow syntax, though the appearance is sometimes a brief one.

2.2 Stacking cases, part 2: two Inherent cases

Next, let us consider an example in which the first Case assigned to the DP is an Inherent Case:



In Lardil (and Japanese), we have seen that such examples yield DPs with multiple morphemes; in Lardil, for instance, the lower Probe might be the head responsible for assigning Instrumental case to instruments, while the higher Probe might be future T. The DP *kurrumbuwarur* ‘multi-pronged.spear-INSTR-FUT’ in (26) is an instance of the DP in (25):

- (26) Ngada la-**thur** liban-**kur** kurrumbuwa-**ru-r**
 I spear-**FUT** pumpkinhead -**FUT** multi.pronged.spear -**INSTR-FUT**
 ‘I will spear the pumpkinhead with a multi-pronged spear.’

Instrumental Case crucially differs from Accusative Case in that it is interpretable at LF as well as at PF. Consequently, we should not expect Instrumental Case ever to be checked off at all. Since it was the process of Case-checking that forced Accusative case to disappear, we expect that Instrumental case will never disappear, which appears to be correct.

We thus derive the result that Structural Case, to be morphologically instantiated, must be on the periphery of the nominal inflection, while no such condition holds for Inherent Case or other types of interpretable nominal morphology. Deriving these results has involved a number of assumptions, listed in (27):

- (27) a. Structural Case is uninterpretable at LF, though it has a PF interpretation.
- b. Inherent Case is interpretable both at LF and at PF, and therefore need not be checked.
- c. PF-Spellout and LF-Spellout may take place at different times, as may Case checking and Case assignment.
- d. PF-Spellout of DP has the consequence that no further morphology may be added to the DP.
- e. The Probe which checks off Structural Case is the same as the one which assigns it⁷.
- f. In Lardil, at least, PF-Spellout of the verb phrase is delayed until the verb is morphologically complete.

2.3. Linguistic variation

The preceding discussion has mainly centered on Lardil. Of course, Lardil is somewhat unusual in allowing strings of case morphemes to attach to nominals. How should we distinguish Lardil from, for instance, Russian? We have seen that in Russian, Genitive of Negation replaces Structural Cases but simply cannot attach to DPs with Inherent Case (or to non-DPs).

At least two proposals suggest themselves. In one approach, we would make Russian syntactically identical to Lardil; Russian Genitive of Negation is assigned to everything in the VP, just as Lardil Future marking is. In a subsequent morphological component, however, Russian DPs with multiple case marking undergo a process of impoverishment, which removes the outer Case marking.

Alternatively, we might parameterize the timing of DP Spellout. Lardil DPs with Inherent Case do not undergo PF-Spellout immediately, and therefore can have further instances of Case assigned to them; Russian DPs, by contrast, undergo PF-Spellout as soon as Inherent Case is assigned to them, making them impervious to later Case assignment. This need not mean

⁷ Though see footnotes 5 and 6.

that Probes can no longer Agree with Russian DPs once they have Inherent Case, but no further Case features can be assigned to them.

Schütze (2001) offers a strong argument for something like the second of these approaches. He points out that in Icelandic, Nominative case is typically assigned to the subject, but that if the subject receives an inherent case (for instance, quirky Dative case, assigned to the subjects of certain psychological predicates), then Nominative case is assigned to the object, and the verb agrees with the object in number (Schütze 2001, 223-224):

(28) a. Við þurftum vinnu

we.NOM needed.1PL job.ACC

‘We needed a job’

b. Mér líka þessir bílar

I.DAT like.3PL these cars.NOM

‘I like these cars’

As Schütze points out, these facts lend themselves to an account in which the Probe responsible for Nominative case preferentially assigns this Case to the subject, but is blocked from doing so when the subject has an Inherent Case, and forced to Agree with the object instead. The account does not crucially rely on Dative subjects being completely inert for agreement, but it must be impossible to Agree with them for Case⁸.

⁸Anagnostopoulou (2003) offers an account of the requirement that Icelandic Nominative objects be 3rd person:

(i) a. Henni leiddust **þeir**
she.DAT found.boring.3PL them.NOM
‘She found them boring’

b. *Henni leiddust **við**
she.DAT found.boring.3PL us.NOM
‘She found us boring’

Her account crucially depends on there being a single Probe which Agrees, first with the Dative subject, and then with the Nominative object; the first Agree relation removes the Probe’s ability to agree for Person, and forces subsequent Agree relations to be with Personless (that is, 3rd person) DPs. For her account to succeed, however, she only needs Agreement to be for Person, not for Case.

Schütze's argument pushes us toward an account in which Icelandic DPs with Inherent case are not just morphologically unable to bear another case, but are actually syntactically unable to serve as Goals for the Agree relation that would assign them Case. Extending the account offered in the last section, then, we might say that in Icelandic (and possibly also in Russian) a DP with Inherent case is morphologically complete, and undergoes PF-Spellout, rendering itself inaccessible to further Agree relations involving Case. Structurally Case-marked DPs, on the other hand, are apparently not spelled out, at least in Russian, since they can subsequently receive an Inherent case (such as Genitive of Negation) which will prevent the morphological instantiation of their Structural case.

2.4 A-movement

Thus far, we have developed a theory of multiple Case assignment to a single DP which yields the following predictions:

- (29)
- a. In all languages, if Case is assigned to a DP which already has Structural Case, the Structural case should vanish, replaced by the new Case.
 - b. In some languages, a DP with Inherent Case cannot be assigned another Case.
 - c. In other languages, a DP with Inherent Case can be assigned another Case; the new Case will be attached outside of the Inherent Case morpheme.

Our discussion of Structural and Inherent case has been somewhat asymmetrical. We have seen evidence that Inherent Case forces early PF Spellout of the DP in some languages (e.g., Icelandic, Russian) and not in others (Japanese, Lardil), but we do not know whether a similar parameter constrains Structural Case. Looking for the effects of such a parameter will entail finding examples of constructions which replace Structural Case with another case, in some languages but not in others.

The theory developed here has been based on phenomena of “case concord”, avoiding discussion of movement into Case positions. The theory does allow us to analyze such movements in a new way, in principle. For instance, we might reanalyze Passive constructions as involving, not failure to assign Accusative Case, but replacement of Accusative with a subsequently assigned Nominative. Since Accusative is structural, we expect that subsequent assignment of another case will entail replacement of Accusative with the new case. Evidence that Passive verbs can in fact license Accusative case has been offered a number of times, as for example in Kubo’s (1990) analysis of Japanese passives like (30). In such examples, Accusative is clearly licensed on the object, and the object’s possessor is argued to move into the external subject position (see also Marantz 1991 for further discussion and examples):

(30) Hanako-ga doroboo-ni [__ yuubiwa-o] torareta.

Hanako-NOM thief-DAT ring-ACC stole.PASS

‘Hanako had a thief steal her ring on her’

If we did analyze Passive verbs as assigning Accusative case as usual, evidence for a parameter governing PF-Spellout of Structurally Case-marked DPs could come from cross-linguistic variation in the case on subjects of passives. Languages which could delay Spellout of Accusative-marked DPs could replace Accusative with Nominative under passive, while languages which had to spell out Accusative-marked DPs as early as possible would retain Accusative case-marking⁹.

⁹ In fact, given the frequency with which Nominative (and Absolutive) cases are morphologically unmarked, we could view Nominative case as the result of a delay in PF Spellout of the Accusative object (perhaps triggered by the passive morphology on the verb, just as Future morphology delays PF Spellout of the object in Lardil). The direct object of a passive, on this view, is assigned Accusative, as objects always are, but PF Spellout fails to take place until after this Accusative case has been checked off, and the resulting Caseless nominal is realized as Nominative. Taking this idea further, we could imagine that languages universally assign Ergative case to subjects and Accusative case to objects, with variation only in which DP delays PF Spellout until after its case has been checked off. I hope to promote this idea (which I’m sure I’m not the first to propose) from footnote to main text someday.

I will have to leave the question of whether there are any clear examples of the latter type for future research, unfortunately. There are indeed reports of languages in which accusative subjects of passives are possible, but for the examples I have seen, accusative subjects and nominative subjects are both options, which makes the situation somewhat less clear (Ukrainian, from Sobin 1985):

(31) a. Cerkva bula zbudovana
church.NOM was.FEM.SG built.FEM.SG

‘The church was built’

b. Cerkvu bulo zbudovano
church.ACC was.NEUT.SG built.NEUT.SG

‘The church was built’

Passive interacts with Lardil tense spreading and Russian genitive of negation in different ways, but here I think the difference can be attributed to differences in the height of the Probe assigning the Inherent Case, rather than to differences in the timing of DP Spellout. We should expect the Russian Negation which triggers Genitive spread to be structurally lower than the Lardil Tense which triggers Tense spread; to the extent that the Mirror Principle can be trusted, Lardil offers evidence that this is so, since Tense is attached outside Negation:

(32) kurri-neng-kur

see NEG FUT

‘will not see’

Thus, Russian Genitive of Negation should apply earlier in the derivation than Lardil Tense spreading does. Suppose we assume that Passive applies at the same point in the derivation in

both languages. If there is a difference between the two languages, it would have to be the result of passive applying between the two processes, so that the processes occurred in the order below:

- (33) a. Russian Genitive of Negation
b. Passive
c. Lardil Tense spreading

If the operations are ordered as in (33), then we expect that Passive ought to bleed Lardil Tense spreading, but not Russian Genitive of Negation. In other words, Passive would move a Lardil direct object out of the VP before Tense spreading applied, while a Russian direct object would already have been affected by Genitive of Negation before Passive applied. This is in fact what we find; subjects of Russian negative passives are Genitive, but subjects of Lardil future passives are not Future:

- (34) a. Pis'ma ne bylo polučeno
letter.GEN not was received
'No letter was received'
b. Liban la-yi-thur
pumpkinhead.NOM spear-PASS-FUT
'The pumpkinhead will be speared'

Thus, I must leave open the question of whether PF Spellout of Structurally case-marked DPs is parameterized, as (in the theory developed here) the PF Spellout of Inherently case-marked DPs seems to be. If there is a parameter for Structurally case-marked DPs, then it clearly need not have the same value as the corresponding parameter for Inherently case-marked DPs; Russian, for example, is required to spell out Inherently case-marked DPs early (which is why

they cannot receive any other Case marking) but Structurally case-marked DPs may be affected by subsequent Case assignment (for example, by Genitive of Negation).

2.5 LF-Spellout

Thus far, we have arrived at the conclusion that uninterpretable morphology (such as structural Case) must be on the periphery of the nominal inflection, while interpretable morphology need not be. In this section we will return to a piece of Lardil data which challenges that conclusion, and allows us to sharpen it.

The facts in question are given in (11), repeated here as (35):

- (35) a. Ngada kangka niween were-thuru-Ø wangalk-uru-Ø
I tell him.ACC throw-FUT-ACC boomerang-FUT-ACC
'I told him to throw the boomerang'
- b. Kangka niya were-thur wangalk-ur!
tell him.NOM throw-FUT boomerang-FUT
'Tell him to throw the boomerang!'

As (35) shows, Lardil control clauses are marked for Future tense, but they are also marked to Agree with their controller; the Accusative direct object in (35a), for instance, triggers spread of Accusative case to the constituents of the control clause.

The ordering of morphemes in (35) is as we expect; in (35a), for example, the direct object *wangalkuru* 'boomerang-FUT-ACC' receives Future morphology from the Tense of its own clause, and then Accusative morphology from the controller in the higher clause¹⁰. The account given here is intended to predict that morphology which is uninterpretable at LF can only show up on the periphery of an inflected word. Thus far, we have been concerned mainly

¹⁰ If the account developed here is right, of course, it first receives an Accusative feature from the *v* of its own clause, but this feature is checked off and deleted before the direct object is spelled out to PF.

with the distribution of Accusative morphology, and the Accusative morpheme on this word fits the general pattern. But what about the Future morpheme? Future might be interpretable on the verb, but is it interpretable on the direct object?

Tense morphology on Lardil nominals is purely determined by concord, and is not independently interpreted; examples like (36), for instance, are impossible in Lardil:

(36) *Ngada kurri ngithun-kur kerndi-wur

I saw my -FUT wife -FUT

‘I saw my future wife’

Still, we might try to claim that Tense morphology, wherever it is realized, indicates the tense of the clause; LF interpretability might not depend on language-particular factors about the realization of a particular morpheme on this or that word or set of words.

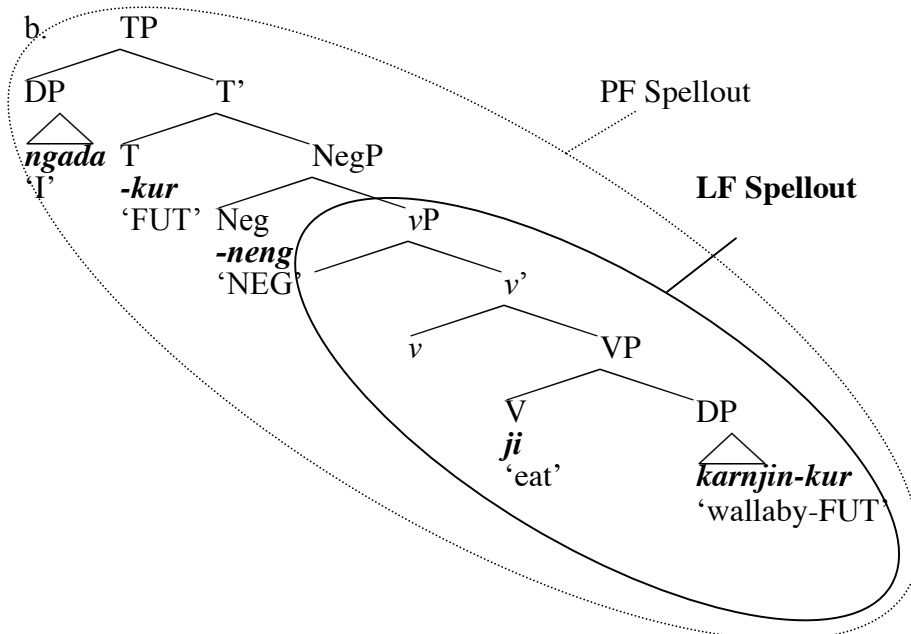
However, this claim is at odds with the conclusions of Pesetsky and Torrego (2001), who propose that all features, including Structural Case features, are interpretable in some position. Nominative Case, for them, is an instance of Tense, interpretable on the T head but uninterpretable on the DPs where it finds itself. In their view, Structural case and the nominal morphology involved in Lardil tense concord cannot be distinguished as I have just tried to do; both are instances of features which would be interpretable elsewhere but are not interpretable on the nominals where they are morphologically expressed.

The main claim of this paper has been that Structural Case features may not be sent to LF, since they are uninterpretable at LF, and that one way of achieving this is to delete them in the narrow syntax before LF Spellout. On the view developed here, Case morphology appears when Case features are assigned in the narrow syntax before PF Spellout and checked off before

LF Spellout is reached. For the most part, we have concentrated on the timing of PF Spellout, concluding that it is determined partly by the value of Tense, at least in Lardil.

Let us now consider the timing of LF Spellout. In particular, suppose that ν P (or perhaps just transitive ν P; these are the only instances of ν P which will concern us) invariably undergoes LF Spellout, perhaps after the head taking ν P as a complement has been Merged¹¹. For sentences in the Future tense, in the theory under development here, this will mean that PF Spellout of the contents of ν P will take place after LF Spellout:

- (37) a. Ngada *ji-neng-kur karnjin-kur*
 I eat-NEG-FUT wallaby-FUT
 ‘I won’t eat the wallaby’



In the tree in (37b), PF Spellout of the contents of ν P is delayed by the Future morpheme in T, and takes place after LF Spellout of ν P. This provides us with another way for LF-uninterpretable morphemes to surface in PF. Any material added to the ν P after LF Spellout will never be sent to LF for interpretation; the LF representation of ν P, by hypothesis, is fixed once

¹¹ This will allow the Accusative case of the object to always be checked prior to LF Spellout, if (following footnote 6) the Σ head which takes ν P as a complement is responsible for this checking.

vP undergoes LF Spellout. Consequently, a Probe like Lardil T will be able to assign (arguably LF-uninterpretable) Future morphology to vP-internal phrases like the direct object without creating structures that LF will reject.

We thus arrive at a more specific version of the generalization with which the paper began. We expect, in general, that if a head bears both LF-intepretable and LF-uninterpretable morphology, all of the uninterpretable morphemes will have to appear outside all of the interpretable morphemes. Informally, this follows from the requirement that all and only the interpretable morphemes appear in the LF representation. The features represented by LF-uninterpretable morphology will either have to be checked off and deleted before the interpretable morphemes are attached and the representation is sent to LF, or they will have to be attached after LF Spellout, and hence outside any morphemes which contribute to interpretation.

3. Conclusion

I have claimed that certain conditions on the concatenation of nominal morphology in Lardil (and in other languages) can be captured if we make certain assumptions about the nature of Case assignment and checking, and about the timing of Spellout. In particular, I have claimed that at least Structural cases are both assigned and checked in the narrow syntax, either by the same Probe or by adjacent Probes. I have also claimed that we should distinguish between PF Spellout and LF Spellout; the narrow syntax is required to provide each interface with an acceptable structure, but no single structure need be acceptable to both interfaces. We have drawn the following conclusions about the timing of Spellout, with varying degrees of certainty:

- (38) a. Inherently Case-marked DPs in languages like Russian and Icelandic undergo PF-Spellout.
- b. At least in Lardil, clausal PF Spellout takes place as soon as the verb is morphologically complete, though not before Accusative case assignment.
- c. vP invariably undergoes LF Spellout.

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