

# Morphological and Abstract Case<sup>1</sup>

Julie Anne Legate

## Abstract

This paper examines the relationship between abstract and morphological case, arguing that morphological case realizes abstract Case features in a post-syntactic morphology, according to the Elsewhere Condition. A class of *prima facie* ergative-absolutive languages is identified wherein intransitive subjects receive abstract nominative Case and transitive objects receive abstract accusative Case; these are realized through a morphological default, which is often mislabeled as absolutive. Further support comes from split ergativity based on a nominal hierarchy, which is shown to have a morphological source. Proposals that case and agreement are purely morphological phenomena are critiqued.

Keywords: ergativity, Warlpiri, Niuean, Enga, Hindi, Pama-Nyungan, Icelandic, inherent case, quirky case, morphological case, abstract Case

## 1 Introduction

This paper explores the relationship between abstract Case and morphological case. I argue that abstract Case features are determined syntactically, and realized in a post-syntactic morphological component. This morphological realization of abstract Case features is governed by the Elsewhere Condition (Anderson 1969, Kiparsky 1973, Halle & Marantz 1993, Halle 1997), resulting in an imperfect relationship between syntax and morphology, but one that is as faithful as possible given the morphological resources of the language. The data used in the argumentation come primarily from ergative languages.

I identify a class of *prima facie* ergative-absolutive languages in which absolutive, that is a case that groups together intransitive subjects and transitive objects, does not exist—neither as an abstract Case nor as a morphological case. Instead, the “absolutive” is the default morphological realization of abstract Case features, used when no realization of the specific Case feature is available. This morphological default is inserted for both nominative Case on the intransitive subject and accusative Case on the transitive object. The situation is thus entirely parallel to English nouns, for which nominative Case on the subject and accusative Case on the object are both morphologically realized by a (null) default. I refer to this class of ergative-absolutive languages as ‘absolutive as a morphological default’ (ABS=DEF).

Not all ergative-absolutive languages fall into this class. For other languages, the standard identification of absolutive with nominative is appropriate (see *inter alia* Murasugi 1992, Bittner 1994, Bittner & Hale 1996a,b, Ura 2001). At times I highlight

the contrasts in behaviour between ABS=DEF languages and these ‘absolutive as nominative’ (ABS=NOM) languages.

Note that for neither of these classes of ergative-absolutive languages is the concept “absolutive” meaningful. One may reasonably question whether the concept is meaningful in any ergative-absolutive language. I conjecture that it is not, that the absolutive is a spurious generalization that has been obscuring a variety of interesting case marking patterns. Verifying this conjecture for the full range of ergative-absolutive languages, however, is well beyond the scope of this paper.

My explication of ABS=DEF languages includes languages that show an ergative split based on a nominal hierarchy. This type of split ergativity has generated diverse proposals: functional (e.g. Dixon 1994, Moravcsik 1978, Comrie 1989), diachronic (e.g. Garrett 1990, Givón 1994, Lightfoot 1999), and syntactic (e.g. Jelinek & Carnie 2003, Kiparsky 2004, Carnie 2005b, Alexiadou & Anagnostopoulou 2006). I show that this type of split ergativity requires a morphological explanation:<sup>2</sup>

The theoretical framework employed incorporates a broadly Minimalist syntax bifurcating towards phonetic interpretation at PF and semantic interpretation at LF. Two types of abstract Case features are assigned in the syntax: (i) *inherent Case* (in the sense of Chomsky 1986), assigned to a DP in its merged position, which is also the position that determines thematic interpretation (Hale & Keyser 1993, 2002; Chomsky 1995 and subsequent); (ii) *structural Case*, assigned to a DP in an A-position based on closest c-command<sup>3</sup>—thus I apply Chomsky’s (2000, 2001a, 2001b) Agree operation to Case. Morphology is situated on the branch towards PF. I adopt Late Insertion of functional items (see Halle & Marantz 1993, Marantz 1995, Chomsky 2001a,b; see also Anderson 1992, Beard 1995 for related theories): phonological material is inserted in the morphology to realize bundles of syntactic features. This Vocabulary Insertion proceeds according to the Elsewhere Condition, thus the lexical item that realizes the most syntactic features (while not conflicting in features) is inserted.

Section 2 provides evidence for languages in which absolutive is a morphological default; this section considers: the available case morphemes, DPs without abstract Case, absolutives in nonfinite clauses, additional absolutive DPs, and agreement patterns. The existence of the ABS=DEF class constitutes the first demonstration of the close but imperfect relationship between abstract Case and morphological case. Section 3 extends this analysis to explain split ergativity based on the nominal hierarchy in Pama-Nyungan languages; DP-internal case mismatches are shown to be particularly revealing. Section 4 contrasts the proposed analysis with purely morphological analyses of agreement and case, arguing that in fact syntax plays a crucial role. Section 5 concludes.

I begin in the following section by presenting four “ergative-absolutive” languages that lack absolutive.

## 2 The Natures of Absolutive Case

In this section, I provide evidence for ABS=DEF languages, that is languages in which T assigns nominative Case to the intransitive subject (S) and  $\bar{v}$  assigns accusative Case to the transitive object (O). In this class of ergative-absolutive languages, nominative case morphology and accusative case morphology are lacking. Thus, when Vocabulary Insertion applies, the Elsewhere Condition determines that both nominative and accusative abstract Case are realized through a morphological default, the “absolutive”, since no more specific compatible lexical item is available. In this section I discuss four such languages: Warlpiri (Pama-Nyungan, South-West, Ngarga), Niuean (Austronesian, Polynesian, Tongic; data from Massam 2006, Seiter 1980), Enga (Trans-New Guinea, West-Central; data from Lang 1973, Li & Lang 1979, van Valin 1981), and Hindi (Indo-Aryan; data from Mohanan 1994, Mahajan 1990).<sup>4</sup> These contrast with ABS=NOM languages, in which absolutive corresponds to abstract nominative Case, assigned by T to both S and O.<sup>5</sup> An ABS=NOM language I mention for purposes of contrast is Georgian (Kartvelian, data from Harris 1981, Hewitt 1987).

For both types of ergative-absolutive languages, I follow Woolford (1997), among others, in claiming that ergative is inherent case, licensed by the  $\bar{v}$  that introduces the external argument (cf Bowers’ (1993) PredP, Collins’ (1997) TrP, Kratzer’s (1996) VoiceP, as well as Chomsky 1995, Marantz 2001). This approach straightforwardly accounts for the generalization that ergative is only found on underlying external arguments (Marantz 1991; see section 4.1 for related discussion). For additional argumentation that ergative is inherent, see Woolford (1997); see Legate (2005) and Woolford (2006) for ergative assignment by  $v$ . Inherent Case-marked DPs may raise to satisfy the EPP feature of T, thus accounting for the standard observation that the ergative c-commands the absolutive (see for example Anderson 1976, Bobaljik 1993, Legate 2002b, 2003b).

I locate the distinction between the two types of ergative-absolutive languages in the lexical entries of the  $\bar{v}$  heads:<sup>6</sup> in ABS=DEF languages, transitive  $\bar{v}$  assigns accusative Case, whereas in ABS=NOM languages, transitive  $\bar{v}$  does not.<sup>7</sup>

As an aside, notice that for these ABS=DEF languages nominative Case is not assigned in transitive clauses: the subject receives inherent ergative Case from  $\bar{v}$ , and the object receives structural accusative Case from  $\bar{v}$ . This is in apparent contradiction to the claim that nominative Case on T is an uninterpretable feature that must be checked for the derivation to converge (see Chomsky 1995). An adequate, but unsatisfying, approach would be to suggest that (finite) T comes in two varieties, one with the nominative Case feature and one without; the correct T must be chosen for the derivation to converge. The approach adopted here is that Case is not an uninterpretable feature on functional heads. When merged into the derivation,

T probes down the tree for a DP with an unvalued Case feature. If one is found, T values the feature to nominative. If none is found, the derivation continues unaffected. This approach is in the spirit of both Case assignment in the Government and Binding framework (e.g. Chomsky 1981), and recent work that interprets Case as an interpretable feature of a functional head (see Pesetsky & Torrego 2001, Svenonius 2001).

The claim that ergative Case is assigned in ABS=DEF languages in clauses in which nominative/absolutive Case is not also runs counter to the intuitions of many researchers (as reflected to varying degrees in Yip et al 1987, Marantz 1991, Bittner & Hale 1996a,b, among others) that ergative is dependent on nominative/absolutive. However, this intuition is empirically problematic, as evidenced by: (i) “split S” languages, in which unergative subjects bear ergative Case (while unaccusative subjects bear nominative/absolutive) (for example, Laz (Blake 1994), Central Pomo (Mithun 1991)); (ii) languages that show overt ergative and accusative morphology in transitive clauses in the absence of any nominative/absolutive (for example, Djapu and Margany (Pama-Nyungan, discussed in section 3 below), Nez Perce (Rude 1986, Woolford 1997, Carnie & CashCash 2006), Kham (West Tibetan, Bittner 1994:13-14), Cashinawa (Panoan from Peru, Dixon 1994), among many others.)

In this section, I consider five characteristics of the ABS=DEF languages: available case morphemes, Caseless DPs, cases in nonfinite contexts, additional absolutes, and case-agreement interactions. I demonstrate that the proposed analysis explains the behaviour of these languages in all five areas.

## 2.1 Case Morphemes

My approach to ABS=DEF languages is that the intransitive subject and transitive object only bear the same morphological case because the languages lack nominative case morphology and accusative case morphology. Here, I present the case paradigms from Warlpiri, Niuean, Enga, and Hindi illustrating these lacunae.<sup>8</sup>

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|---|---|
| (1) Warlpiri (based on Hale et al 1995) <sup>9</sup><br>[Ergative] ↔ -rlu/-ngku<br>[Dative] ↔ -ku<br>[Allative] ↔ -kurra<br>[Ablative] ↔ -ngurlu<br>[Locative] ↔ -rla/-ngka<br>[Translative] ↔ -karda<br>[Case] ↔ -ø(=“absolutive”) | (2) Hindi (based on Mohanan 1994:60)<br>[Ergative] ↔ -ne<br>[Dative] ↔ -ko<br>[Instrumental] ↔ -se<br>[Genitive] ↔ -kaa<br>[Locative <sub>1</sub> ] ↔ -mē<br>[Locative <sub>2</sub> ] ↔ -par<br>[Case] ↔ ø(=“absolutive”) |
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| <p>(3) Niuean (based on Seiter 1980:28-37)<sup>10</sup></p> <p>[Ergative] ↔ e / proper names, pronouns</p> <p>[Ergative] ↔ he / (common nouns)</p> <p>[Locative] ↔ i / proper names, pronouns</p> <p>[Locative] ↔ he / (common nouns)</p> <p>[Possessive] ↔ ha/a / proper names</p> <p>[Possessive] ↔ ha / pronouns</p> <p>[Possessive] ↔ he / (common nouns)</p> <p>[Case] ↔ a / proper names, pronouns (=“absolutive”)</p> <p>[Case] ↔ e / (common nouns) (=“absolutive”)</p> | <p>(4) Enga (based on Lang 1973: xxiv-xxvi, Li &amp; Lang 1979:312)</p> <p>[Ergative] ↔ -me/-mi<sup>11</sup></p> <p>[Possessive] ↔ -nya</p> <p>[Vocative] ↔ -oo</p> <p>[Comitative] ↔ -pa (dual)/-pipa (dual/plural)</p> <p>[Locative] ↔ -nya/-sa/-ka</p> <p>[Temporal] ↔ -sa/-nya/-pa</p> <p>[Case] ↔ ∅ (=“absolutive”)</p> |
|---|--|

These languages thus indeed lack nominative and accusative case morphology, and so cannot faithfully realize abstract nominative or accusative Case features determined in the syntax. In these paradigms, I have assumed that the case form standardly referred to as absolutive/nominative is the morphological default realizing no features beyond [Case]. In the next section, I provide evidence for this claim.

## 2.2 Caseless DPs

In this section, I provide support for the status of the absolutive as a morphological default in Warlpiri, Niuean, Enga, and Hindi. This comes from constructions in which no abstract Case features are assigned to a DP (the DP escaping the Case Filter by virtue of appearing in an A'-position).<sup>12</sup> One such construction is hanging topic left dislocation, in which a topical DP is base-generated adjoined to the clause and thus fails to receive abstract Case (see for example the papers in Anagnostopoulou et al. 1997 for discussion). Since the syntax does not provide the morphology with specific Case features to realize on hanging topics, they must receive default case morphology.<sup>13</sup> Thus, I predict that hanging topics appear in the absolutive in Warlpiri, Niuean, Enga, and Hindi.<sup>14</sup> This prediction is borne out. In Warlpiri, hanging topics appear in absolutive case (see Legate 2002b, 2003b for further discussion of the hanging topic left dislocation construction in Warlpiri). This is illustrated in (5); the hanging topics ngarnkamarda ‘pink cockatoo’ and kakalyalya ‘pink cockatoo’, both appear in absolutive. The associated position in the clause is filled by ngula ‘that’, which bears ergative case morphology.

- (5) Ngarnkamarda, kakalyalya, ngula-ngku-ju ka nga-rni  
pink.cockatoo.ABS pink.cockatoo.ABS that-ERG-TOP PresImpf eat-Npast  
watiya-warnu – watiya-ngarnarra – miyi-ji.  
tree-from tree-dweller fruit-Top  
‘The Pink Cockatoo eats those Acacia seeds.’ (Warlpiri Dictionary Project  
1993 [henceforth WDP 1993])

Hanging topics in Niuean also bear absolutive (see Seiter 1980:116-118 for discussion). In the following example, the hanging topic fifine ia ‘that woman’ is preceded by the absolutive marker. In contrast, the associated position in the clause is filled by ia ‘she’, which is preceded by the ergative marker:

- (6) Ko e fifine ia, to fakaata: mai e ia ke uta e au e  
Pred Abs woman that to let Dir1 Erg she Subj take Erg I Abs  
motoka: haana  
car her  
‘That woman, she’ll let me take her car.’ (Seiter 1980:117)

Clear data from Enga are lacking; however, Lang (1973) provides a possible example. In (7), pe-ly-á-mo dóko ‘the one who is going’ appears to be a hanging topic, adjoined to the main clause óngo akáli-aka ‘that is definitely a man’. If so, the hanging topic is absolutive, as predicted.<sup>15</sup>

- (7) Pe-ly-á-mo dóko óngo akáli-aka  
go-Pres-3sg-Aug Det.ABS Det man-Emp  
‘That is definitely a man, the one who is going.’ (Lang 1973:xxvii)

Finally, hanging topics in Hindi also bear absolutive (Dwivedi 1994:30-33). In the following example, the hanging topic vo aurat ‘that woman’ is absolutive, whereas the associated clause-internal position, usse ‘her’, bears comitative:

- (8) vo aurat, Ali samajhte hai ki Sudha-ne us-se  
DEM woman.ABS Ali.ABS thinks that Sudha-ERG her-COM  
baat kiyaa thaa  
matter.ABS do.Perf be.Past  
‘That woman, Ali thinks that Sudha talked to her.’ (Dwivedi 1994:31)

Thus, in all four languages, DPs lacking abstract Case are morphologically absolutive.

In the following section, I provide evidence from nonfinite contexts demonstrating a split in licensing between absolutive case on the intransitive subject and absolutive case on the transitive object.

## 2.3 Nonfinite Clauses

A core aspect of my proposal for ABS=DEF languages is that the abstract Case assignment on the intransitive subject and transitive object differ, despite the identical morphological case marking.<sup>16</sup> Specifically, the abstract Case on S is nominative, whereas the abstract Case on O is accusative. This makes a strong prediction for nonfinite contexts: absolutive on S should become unavailable, since it is abstract nominative and thus dependent on finite T; in contrast, absolutive on O should remain available, since it is abstract accusative and thus independent of T. I demonstrate that this prediction is borne out for three of the ABS=DEF languages, Warlpiri, Enga, and Hindi. For the fourth language, Niuean, I note that the prediction cannot be tested. Finally, I contrast the behaviour of absolutive in nonfinite contexts in these ABS=DEF languages with the behaviour of absolutive in the ABS=NOM language Georgian, where absolutive is lost uniformly on S and O.

First, consider Warlpiri. Warlpiri exhibits nonfinite contexts consisting of a nominalized verb phrase.<sup>17</sup> In the examples below these phrases express contemporaneity, and so are most naturally translated to English through finite “while”-clauses. In these nonfinite phrases in Warlpiri, intransitive subjects cannot be absolutive.<sup>18</sup>

- (9) a. \*Kurdu-lpa manyu-karri-ja [ngati-nyanu  
 child.ABS-PASTIMPF play-stand-PAST [mother-ANAPH.ABS  
 jarda-nguna-nja-rlarni]  
 sleep-lie-NONFIN-OBVC]  
 “The child was playing while his mother was asleep.”
- b. \*Ngarrka-patu-rlu ka-lu-jana puluku  
 man-PAUC-ERG PRESIMPF-3pl.SUBJ-3pl.OBJ bullock.ABS  
 turnu-ma-ni [kurdu parnka-nja-rlarni]  
 group-CAUSE-NPAST [child.ABS run-NONFIN-OBVC]  
 “The men are mustering cattle while the children are running.”

Instead, the intransitive subjects must bear dative case; thus the above sentences become grammatical when the dative case suffix is added, yielding ngati-nyanu-ku and kurdu-ku respectively. In contrast, transitive objects uniformly bear absolutive, and may not bear dative, as seen by miyi ‘food’ in the following:

- (10) Ngarrka-patu-rlu ka-lu-jana puluku turnu-ma-ni,  
 man-PAUC-ERG PRESIMPF-3pl.SUBJ-3pl.OBJ bullock muster-NPAST  
 [karnta-patu-ku/karnta-patu-rlu miyi/\*miyi-ku  
 [woman-PAUC-DAT/woman-PAUC-ERG food.ABS/\*food-DAT  
 purra-nja-puru.]  
 cook-NONFIN-TEMPC]

‘The men are mustering cattle while the women are cooking the food.’

Transitive subjects (A) may bear either ergative or dative, apparently in free variation. (11a) illustrates use of ergative on the transitive subject *ngatinyanu* ‘his mother’, and (11b) illustrates use of the dative on the transitive subject *karnta* ‘woman’.

- (11) a. Kurdu-lpa manyu-karri-ja, [ngati-nyanu-rlu  
child-PASTIMPF play-stand-PAST [mother-POSS-ERG  
karla-nja-rlarni.]  
dig-NONFIN-OBVC]  
‘The child was playing, while his mother was digging (for something).’  
(Laughren 1989:[44a])
- b. Nyalali-rli ka warlu yarrpi-rni, [karnta-ku kurdu-ku  
girl-ERG PRESIMPF fire.ABS kindle-PAST [woman-DAT child-DAT  
miyi yi-nja-rlarni.]  
food.ABS give-NONFIN-OBVC]  
‘The girl is building a fire, while the woman is giving food to the baby.’  
(Hale 1982:[139b])

This striking split in behaviour between absolutive on S and absolutive on O is explained on the present proposal. In nonfinite clauses, absolutive is not available for intransitive subjects, because this corresponds to abstract nominative Case licensed by finite T, but is available for transitive objects, because this corresponds to abstract accusative Case licensed by  $\underline{v}$ . Ergative, being assigned by  $\underline{v}$  is also independent of finite T and so also available in nonfinite clauses. The dative case available on transitive and intransitive subjects is explained by the observation that these phrases are nominalized (see footnote 17). The subjects of nominals in Warlpiri bear dative case, like *Jakamarra* ‘Jakamarra’ in the following:

- (12) [Jakamarra-ku jaja-nyanu-rlu] ka-ju  
[Jakamarra-DAT maternal.grandmother-Anaph-ERG] PresImpf-1sgObj  
paka-rni  
hit-NPAST  
‘Jakamarra’s grandmother hits me’ (Laughren 2002)

Given the variation between dative and ergative on transitive subjects (A), I propose that nominalization occurs above  $\underline{v}$  (by merger of a D head), either immediately before or immediately after the introduction of the external argument.<sup>19</sup>

Let us now consider the case patterns found in Enga nonfinite clauses. Like Warlpiri, Enga exhibits a distinction between the licensing of absolutive on S and absolutive on O in nonfinite clauses. Absolutive case is available for O in nonfinite clauses in Enga, like *yólé* ‘wages’ in (13a) and *dokosáa* ‘doctor’ in (13b).



- (13) a. baa-mé [yólé nyá-la-nya] kalái pi-ly-a-mó  
 he-ERG [wages.ABS get-INF-DESID] work.ABS do-PRES-3sg.SUBJ-SP  
 ‘He works to get wages’ (Li & Lang 1979:317)
- b. akáli dokó-mé [dokosáa dokó kánj-a-nya]  
 man DET-ERG [doctor DET.ABS see-INF-DESID]  
 más-í-á.  
 think-PAST-3sg.SUBJ  
 ‘The man wanted to see the doctor’ (Li & Lang 1979:319)

However, absolutive is not available for S. To express an overt S, a finite complement clause must be used in place of the infinitival:<sup>20</sup>

- (14) namba-mé [émba Wápaka pú-p-í lá-o] mási-ly-o  
 I-ERG [you.ABS Wabag go-PAST-2sg utter-COMP] think-PRES-1sg  
 ‘I want you to go to Wabag’ (Li & Lang 1979:317) [I want that you go to Wabag]

For Niuean, on the other hand, the predicted behaviour of absolutive in nonfinite clauses cannot be tested. The relevant clause type is typically referred to as the “subjunctive” in Niuean, and its status as finite or nonfinite is not settled. Regardless of the resolution of this issue, the clauses cannot be used to test the prediction in Niuean, since all cases are available: ergative on A (tama ‘child’) and absolutive on O (akau ‘tree’) in (15a), and absolutive on S (Pita ‘Pita’) in (15b).<sup>21</sup>

- (15) a. Kua kamata [ke hala he tama e akau]  
PERF begin [SBJV cut ERG child ABS tree]  
 ‘The child has begun to cut down the tree’ (Massam 2006 [21])
- b. Maeke [ke nofo a Pita i Tuapa]  
 possible [SBJV stay ABS Pita at Tuapa]  
 ‘Pita can stay at Tuapa’ (Massam 2006 [19])

Finally, the prediction can be tested in Hindi, and is borne out. In Hindi nonfinite nominalized clauses, absolutive on the intransitive subject is not available; instead, the intransitive subject bears genitive (Mohanani 1994:78). This is illustrated below for the intransitive subject raam ‘Ram’:

- (16) [raam-ke baiT<sup>h</sup>ne]-par mãã-ne usko k<sup>h</sup>aanaa diyaa  
 Ram-GEN sit-NonFin-LOC mother-ERG him-DAT food-ABS give-Perf  
 ‘When Ram sat down, mother gave him food’ (Mohanani 1994:78)

Genitive is characteristic of the subjects of nominals in Hindi, as anuu ‘Anu’ in the following:

- (17) anuu-kii puraanii kitaab  
 Anu-GEN old book.ABS  
 ‘Anu’s old book’ (Mohanani 1994:13)

In contrast, transitive objects that bear absolutive in finite clauses also bear absolutive in nonfinite clauses, and do not bear genitive (Mohanani 1994:78). This is illustrated in (18) for the object darvaazaa ‘door’.

- (18) ilaa-ne [raam-ke darvaazaa k<sup>h</sup>olne]-par anu-ko DããTaa  
 Ila-ERG Ram-GEN door.ABS open.NonFin-LOC Anu-DAT scold.PERF  
 ‘Ila scolded Anu on Ram’s opening the door’ (Mohanani 1994:186)

The transitive subject in these nonfinite contexts also bears genitive case:

- (19) [ilaa-ke anuu-ko ciD<sup>h</sup>aane]-par ...  
 Ila-GEN Anu-DAT tease.NonFin-LOC  
 ‘On Ila’s teasing Anu, ...’ (When Ila teased Anu ...) (Mohanani 1994:75)

Ergative is not available in Hindi, since, unlike in Warlpiri, assignment of ergative is dependent on the presence of perfective aspect.<sup>22</sup> Perfective aspect is lacking in these adjunct phrases marked with par, eliminating the possibility for ergative Case. Hindi does exhibit another type of nonfinite clause containing perfective aspect, which is marked with the “conjunctive” marker kar. If such clauses allowed an overt subject, we would expect ergative to be possible on their transitive subjects. Unfortunately, these exhibit obligatory subject control and so cannot be tested. See Davison (1981), among others, for discussion on kar clauses; see section 4.1 and references therein for discussion of obligatory control.

To summarize, in Warlpiri, Enga, and Hindi absolutive case on the intransitive subject is lost in nonfinite clauses, while absolutive case on the transitive object is retained. This split in behaviour of absolutive arguments is unexpected under any theory that provides a uniform source for absolutive. However, this split is predicted on the current proposal that absolutive in these languages is a morphological default: absolutive on the intransitive subject masks abstract nominative Case, which is dependent on finiteness and so lost in nonfinite contexts; absolutive on the transitive object masks abstract nominative Case, which is independent of finiteness, and so retained in nonfinite contexts.

The split in behaviour of absolutive arguments in nonfinite clauses in these ABS=DEFAULT languages is in striking contrast with the behaviour of absolutive arguments in nonfinite clauses in Georgian, an ABS=NOM language. In Georgian, both

absolutive on the intransitive subject and absolutive on the transitive object correspond to abstract nominative Case (and are correctly referred to in the traditional literature as nominative, rather than absolutive). Thus, absolutive is uniformly lost in nonfinite contexts; no split in behaviour is found. A relevant nonfinite verb form in Georgian is the nominalized verb (traditionally termed the “masdar”).<sup>23</sup>

The nominalized verb does not allow absolutive, either on S or O. Instead, S and O are marked genitive. Two examples follow: in (20a), the O datv ‘bear’ is marked genitive; in (20b), the S tamad ‘tamada’ is also genitive.

- (20) a. [datv-is mok’vla am t’qeši] ak’rʒalulia  
 [bear-GEN killing.NOM this woods.in] forbidden.it.is.I.2  
 ‘Killing bears in this woods is forbidden’  
 b. [tamad-is damtknareba supraze] uzrdelobaa  
 [tamada-GEN yawning.NOM table.on] rudeness.it.is.I.2  
 ‘It is rude for the tamada to yawn at the table’

A appears as the complement of a postposition mier ‘by’; this is shown by monadir ‘hunter’ in (21).

- (21) [monadir-is mier (datv-is) mok’vla] ak’rʒalulia  
 [hunter-GEN by (bear-GEN) killing.NOM] forbidden.it.is.I.2  
 ‘The killing (of bears) by hunters is forbidden’ (Harris 1981:157)

Thus, the nominalized verb involves nominalization of the verb alone, which then combines with its arguments as a noun rather than a verb. This is in contrast to Warlpiri and Hindi, in which nominalization applies at a higher level, after the verb has combined with the object and v. The proposed analysis explains why Georgian cannot have nominalization at the verb phrase level like Warlpiri and Hindi: in Georgian this would leave O without abstract Case, since O is dependent on finite T for Case.<sup>24</sup>

In sum, in ABS=DEF languages (but not ABS=NOM languages), absolutive on S and absolutive on O are licensed distinctly, as shown by their distinct behaviour in nonfinite clauses. The following section presents further evidence of the heterogeneity of the absolutive in ABS=DEF languages.

## 2.4 Prediction for Other DPs

Absolutive is standardly defined as a case that groups together intransitive subjects, S, and transitive objects, O. However, my analysis predicts a wider distribution of absolutive in ABS=DEF languages. Any DP bearing an abstract Case feature that lacks a distinct morphological realization will be realized as the morphological default,

hence absolutive. Thus, absolutive appears on a range of DP types, and on potentially more than one DP per clause. In this, ABS=DEF languages contrast sharply with ABS=NOM languages, in which absolutive is limited to one DP per clause, either S or O. Absolutive corresponds to nominative Case licensed by T in these languages, yielding its uniqueness. In this section, I consider the case patterns on objects of postpositions, objects in the double object construction, applicative objects, and the case patterns resulting from split ergativity.

Beginning with Enga, we find the predicted wider distribution of absolutive. The objects of postpositions are absolutive, as are both objects in the double object construction. In (22), énda ‘woman’ is the object of the postposition kandaó ‘towards’ and is in the absolutive case.

- (22) akáli dokó-mé [énda kandaó] pií le-ly-á-mo  
 man DET-ERG [woman.ABS toward] word.ABS say-PRES-3sg.SUBJ-SP  
 ‘The man is telling something to the woman’ (Li & Lang 1979:318)

In the double object construction in (23), both objects are absolutive, yielding two absolutive DPs in a single clause: énda ‘woman’ and mená ‘pig’.

- (23) namba-mé énda dóko mená dóko maí-y-ó  
 I-ERG woman DET.ABS pig DET.ABS give-PAST-1sg.SUBJ  
 ‘I gave the pig to the woman’ (Li & Lang 1979:312)

Similarly in Niuean, the object of (benefactive, comitative, and instrumental) prepositions appear in absolutive.<sup>25</sup> Thus, in (24) pene ‘pen’ bears absolutive case as the object of the preposition aki ‘with’, and tagata ‘man’ bears absolutive as the object of the preposition ma ‘for’:

- (24) a. Ne tohitohi a Sione [aki e pene]  
PST writing ABS Sione [with ABS pen]  
 ‘Sione is writing with a pen’ (Massam, to appear [8])  
 b. Gahua a au [ma e tagata kō]  
 work ABS I [for ABS man that]  
 ‘I work for that man there’ (Seiter 1980:36)

Applicative objects in the instrumental advancement construction also bear absolutive. An example follows, in which the applicative object akau ‘club’ bears absolutive:

- (25) Ne ahu aki e ia e akau e tau toa  
PST slay with ERG he ABS club ABS PL hero  
 ‘He slayed the heroes with a club’ (Massam, to appear [14])

Notice that this results in two absolutive DPs in this clause, since the verbal object toa ‘hero’ is also marked absolutive.

For Hindi, it is well-known that the case-marking found on the subject and the case-marking found on the object are independently determined. When the aspectual requirements for the assignment of ergative are not met, the transitive subject appears in absolutive; when the appropriate interpretive requirements for the assignment of the dative are not met, the transitive object appears in absolutive. Multiple absolutives result:

- (26) ravii            kelaa            k<sup>h</sup>aa rahaa t<sup>h</sup>aa  
       Ravi.ABS banana.ABS eat    Prog   be.Past  
       “Ravi was eating a banana” (Mohan 1994:63)

In Warlpiri, two absolutives may also be found in a single clause. Whether the objects of postpositions bear absolutive is difficult to determine in Warlpiri; Warlpiri lacks independent postpositions, instead it exhibits “semantic case” morphemes, which may be case morphemes, or may be suffixal postpositions. If these are suffixal postpositions, their objects indeed appear in the absolutive, as illustrated by kurra ‘to’ and ngurlu ‘from’:<sup>26</sup>

- (27) ngurra-kurra                            ngarna-ngurlu  
       camp.ABS-to                            plant.base.ABS-from  
       ‘to camp’                                ‘from a root’                            (WDP 1993)

A clearer example is found in ergative splits based on nominal-type. The pronouns ngaju ‘I’ and nyuntu ‘you (sg)’ optionally appear as transitive subjects without ergative morphology. The case on the O is unaffected, yielding a multiple absolutive:

- (28) Ngaju ka-rna                            yankirri    nya-nyi.  
       I.ABS PresImpf-1sgSubj emu.ABS see-Npast  
       “I see an emu.”

In sum, in all four ABS=DEF languages, absolutive exhibits a wider distribution than simply S or O.

These data stand in stark contrast to the distribution of the absolutive in Georgian, an ABS=NOM language. In Georgian, absolutive is nominative, and therefore limited to either S or O. Objects of postpositions, suffixal or independent, do not bear absolutive case, but instead bear dative, genitive, instrumental, or adverbial case. For example, the objects of semdeg ‘after’ and -gan ‘from’ bear genitive, and the objects of tana ‘at/near’ and -ši ‘in’ bear dative:

- (29) om-is semdeg      sakhl-is-gan      zgva-s tana      kalak-s-ši  
war-GEN after      house-GEN-from      sea-DAT near      city-DAT-in  
‘after the war’      ‘from the house’      ‘near the sea’      ‘in the city’

The second object in a double object construction receives dative; note gia ‘Gia’ (30):

- (30) nino-m      ācvena      surateb-i      gia-s  
Nino-ERG she.showed.him.it.II.2 pictures-NOM Gia-DAT  
‘Nino showed the pictures to Gia’ (Harris 1981:40)

Most revealing is split ergativity in Georgian. Like Hindi, assignment of ergative in Georgian is dependent on the choice of tense/aspect. Georgian examples to this point have been in tense/aspect series II (aorist and optative), in which ergative is assigned. In tense/aspect Series I (present, future, imperfect, conditional present subjunctive, and future subjunctive), ergative is not assigned.<sup>27</sup> Thus, like Hindi and Warlpiri, considered above, transitive subjects sometimes appear with absolutive case rather than ergative. In Hindi and Warlpiri, we saw that the case of the object is unaffected, resulting in two absolutives in a single clause. In Georgian, in contrast, the object case cannot remain absolutive: the absolutive is unique. In Series I, A bears absolutive, so O cannot. Instead, O receives structural dative case from y. This contrast between Case patterns in Series I and Series II is illustrated here:

- |   |   |
|---|---|
| (31) <u>Series I</u>  | (32) <u>Series II</u>   |
| glex-i      tesavs      simind-s<br>peasant- <u>NOM</u> he.sows.it corn- <u>DAT</u> | glex-ma      datesa      simind-i<br>peasant- <u>ERG</u> he.sowed.it corn- <u>NOM</u> |
| ‘The peasant is sowing corn’  | ‘The peasant sowed corn’  |

In sum, in ABS=DEF languages, absolutive is nonunique and exhibits a distribution wider than S/O. In the ABS=NOM language, Georgian, on the other hand, the absolutive is unique and limited to S/O. In the following section I consider the interaction between Case and agreement.

## 2.5 Interaction with Agreement

In this section, I discuss the patterns of agreement in Enga, Niuean, Hindi, and Warlpiri, considering the relationship between these patterns and the proposed ABS=DEF analysis of these languages.

I adopt a framework in which agreement relationships are established in the syntax on the basis of closest c-command (see Chomsky 2000, 2001a,b). Identically to Case features, these agreement features are realized in a post-syntactic morphology based

on the Elsewhere Condition. Here, I focus on subject agreement. In the most basic instance, (finite) T enters into a relationship with the highest DP argument, which results in T bearing the  $\phi$ -features of the argument, and the argument bearing the nominative Case feature.

An important situation to consider in the present context is one in which the external argument bears inherent Case, and thus cannot receive nominative Case from T. Languages differ as to how this situation is treated, and this difference cuts across the ABS=DEF languages. In certain languages, inherent Case-marked DPs do trigger agreement on T, despite the fact that they cannot receive nominative Case from T. In other languages, inherent Case-marked DPs may not trigger agreement on T.<sup>28</sup>

In an ABS=DEF language, if the inherent Case-marked A may trigger agreement, both A (ergative) and S (nominative, realized morphologically by absolutive) will trigger subject agreement. O may either trigger no agreement, or may trigger distinct object agreement. This A/S subject agreement pattern is found in Warlpiri and Enga. In Warlpiri, A and S trigger subject agreement, and O triggers distinct object agreement. This is illustrated in (33), in which first person singular A and S trigger the subject agreement morpheme -rna in (33a) and (33b), while first person singular O triggers the object agreement morpheme -ju in (33c).

- (33) a. Ngajulu-rlu-rna-ngku      nyuntu    nya-ngu  
           I-ERG-1sg.SUBJ-2SG.OBJ you.ABS see-PAST  
           ‘I saw you’  
       b. Ngaju-rna            parnka-ja  
           I.ABS-1sgSUBJ run-PAST  
           ‘I ran’  
       c. Nyuntulu-rlu-npa-ju      ngaju    nya-ngu  
           you-ERG-2sgNOM-1sgOBJ I.ABS see-PAST  
           ‘You saw me’

In Enga, A and S trigger subject agreement; O does not trigger subject agreement.<sup>29</sup> Thus, in (34a) and (34b), the first person singular A and S subjects trigger the agreement morpheme -ó, while the first person singular O in (34c) fails to trigger agreement. Instead the verb shows third person singular agreement, mo, with the A argument.

- (34) a. namba-mé énda      dóko      mená dóko      maí-y-ó  
           I-ERG      woman DET.ABS pig    DET.ABS give-PAST-1sg.SUBJ  
           ‘I gave the pig to the woman’ (Li & Lang 1979:312)

- b. nambá p-e-ó  
 I.ABS go-PAST-1sg.SUBJ  
 ‘I went’ (Li & Lang 1979:317)
- c. Baá nambá kand-e-á-mo-aka ...  
 he I.ABS see-PAST-3sg-AUG-CONC  
 ‘Although he saw me ...’ (Lang 1973:xxxv)

In an ABS=DEF language in which the inherent Case marked A may not trigger agreement, only S triggers subject agreement. This pattern is found in Niuean.<sup>30</sup> Plural S triggers a reduplicative agreement morpheme on the verb in (35), for the subjects tau mamatua ‘parents’ and laua ‘they two’. In (36), the plural As maua mo Sione ‘Sione and I’ and tau fānau ‘the children’, and the plural Os tau mata afi ‘matches’ and tau fakatino ‘pictures’, all fail to trigger agreement.

- (35) a. Nofo agaia nakai e matua fifine haau i Mutalau?  
 live still Q ABS parent female your in Mutalau  
 ‘Does your mother still live in Mutalau (village)?’
- b. No-nofo agaia nakai e tau ma-matua haau i Mutalau?  
PL-live still Q ABS PL PL-parent your in Mutalau  
 ‘Do your parents still live in Mutalau (village)?’
- c. Mate tuai a ia.  
 die PERF ABS she  
 ‘She’s dead’
- d. Ma-mate tuai a laua  
PL-die PERF ABS they.DUAL  
 ‘They are dead’ (Seiter 1980:62)
- (36) a. Moua oti e maua mo Sione e tau mata afi  
 get all ERG we.DUAL.EXCL with Sione ABS PL piece fire  
 ‘Sione and I have already won all the matches’ (Seiter 1980:67)
- b. Kua tā he tama e tau fakatino  
PERF draw ERG child ABS PL picture  
 ‘The child has been drawing pictures’
- c. Volu nakai he tau fānau e fua niu?  
 grate Q ERG PL children ABS fruit coconut  
 ‘Are the children grating (the fruit of the) coconut?’ (Seiter 1980:70)

Let us consider now the most interesting pattern of the four, that of Hindi. Pre-theoretically, Hindi is described as exhibiting agreement with the highest absolutive.



In (37a), the absolutive S raam ‘Ram’ triggers agreement. In (37b), the absolutive A ravii triggers agreement; notice that the O roTii ‘bread’ is also absolutive, but does not trigger agreement. Finally, in (37c), the A is ergative, so the highest absolutive is the O roTii, which triggers agreement.

- (37) a. raam                      giraa  
           Ram.M.ABS fall.Perf.M.sg  
           “Ram fell hard” (Mohanani 1994:71)
- b. ravii                      roTii                      k<sup>h</sup>aaegaa  
           Ravi.M.ABS bread.F.ABS eat.FUT.M.sg  
           “Ravi will eat bread” (Mohanani 1994:104)
- c. ravii-ne                      roTii                      k<sup>h</sup>aayii  
           Ravi.M-ERG bread.F.ABS eat.PERF.F.sg  
           “Ravi ate bread” (Mohanani 1994:103)

This pattern is initially surprising on the present analysis, since the abstract Case borne by the DP that triggers agreement is inconsistent. In (37a) and (37b) agreement is triggered by subject, which bears nominative Case. In (37c), on the other hand, agreement is triggered by the object, which bears accusative Case. In fact, on this basis alone, the Case on absolutive objects like in (37c) has been analysed as nominative.

I propose that the pattern of agreement found in Hindi is similar in essentials to Niuean in that DPs that bear inherent ergative Case do not trigger agreement. Where the languages differ is this: in Hindi, after the inherent Case-marked DP fails to trigger agreement, T continues to search down the tree for a DP that may trigger agreement, i.e. a DP with structural Case. In (37c), T finds the accusative object, which then triggers subject agreement, even though it has no other relationship with T. I refer to this as aggressive agreement.<sup>31</sup>

Evidence for aggressive agreement comes from two sources. First, we find that (pseudo)-incorporated nominals trigger agreement in Hindi, even though such DPs crosslinguistically lack Case. (See for example, Baker (1988) on the lack of Case on incorporated nouns and Massam (2001) on the lack of Case on pseudo-incorporated NPs.) Thus, these DPs trigger agreement without bearing nominative Case or raising to [spec, T], simply based on closest c-command.

- (38) a. raam-ne                      lakDii    kaaTii  
           Ram.M-ERG wood.F cut.Perf.Fem  
           ‘Ram did wood-cutting’ (Mohanani 1994:107)
- b. puure din    maiN-ne (apne kamre meN) kitaab    paRhii  
           whole day I-ERG    self’s room    in    book.F read.F.sg

‘The whole day I read books in my room.’ (Dayal 2003:[23])

On incorporation in Hindi, see Mohanan (1994:106-117) and Dayal (2003).

The second piece of evidence for aggressive agreement comes from long-distance agreement (see Mahajan 1989, Butt 1995, and especially Bhatt 2005, where this argument is made quite carefully). In long distance agreement, a matrix verb agrees with an embedded object, although the embedded object is Case-licensed in the embedded infinitival clause.

- (39) Ram-ne [roTii khaa-nii] chaah-ii  
 Ram-ERG bread.F.ABS eat-Infin.F want-Perf.F  
 “Ram wanted to eat bread” (Mahajan 1989)

Thus, in (39), the matrix verb chaahii ‘want’ bears feminine morphology, in agreement with the embedded feminine object roTii ‘bread’, even though roTii receives Case from the embedded verb khaanii ‘eat’.

In sum, agreement in Hindi is triggered by a structural Case marked DP based on closest c-command. No other relationship between the DP and T is required. Thus, the agreement patterns are fully compatible with the Case-system proposed here.

To conclude this section, agreement patterns in Warlpiri, Enga, Niuean, and Hindi reflect their Case patterns. In Warlpiri, Enga, and Niuean, although both S and O bear absolutive morphology, only S triggers subject agreement. Warlpiri and Enga differ from Niuean in that the latter disallows subject agreement triggered by the inherent ergative-Case marked A. Finally, Hindi allows both S and O to trigger subject agreement, not because agreement is based on the notion “absolutive”, but rather because agreement is divorced from Case assignment, instead being based on closest c-command of a structural Case-marked DP.

## 2.6 Summary

In summary, Warlpiri, Enga, Niuean, and Hindi are languages in which absolutive is a morphological default, inserted when a morphological realization of the abstract Case is lacking. Intransitive subjects receive nominative Case whereas transitive objects receive accusative Case, despite their identical absolutive morphology. These languages exhibit the following properties: (i) lack of nominative and accusative case morphology; (ii) use of absolutive for DPs without abstract Case (like hanging topics); (iii) loss of “absolutive” on S in nonfinite clauses that only allow a subset of cases, and concurrent maintenance of “absolutive” on O; (iv) use of absolutive on other DPs marked with abstract Cases that lack a morphological realization, potentially resulting in multiple absolutives in a single clause; (v) subject agreement triggered by

the surface subject (A/S), the nominative (S alone), or highest DP with structural Case (aggressive agreement).

In the following section I provide additional evidence for the distinction between morphological case and abstract Case in ergative-absolutive languages, from ergative splits in three Pama-Nyungan ABS=DEF languages.

## 3 Split Ergativity in Pama-Nyungan

### 3.1 Split Ergativity and the Default Absolutive

Pama-Nyungan languages commonly show split ergativity based on nominal-type; thus certain nominals may inflect according to an ergative-absolutive pattern, while others show a nominative-accusative pattern. An example is Gumbaynggir (Gumbaynggiric; Eades 1979), in which third person pronouns and nouns inflect on an ergative/absolutive pattern, first person dual (inclusive and exclusive) and second person singular pronouns inflect on a nominative/accusative pattern, and all other pronouns, kinship terms, and section names show distinct inflection for each of ergative/nominative/accusative. Beginning with Silverstein (1976), this type of split is standardly described as following a nominal hierarchy, whereby nominals falling towards the left of the hierarchy more likely to exhibit ergative marking while those falling towards the right are more likely to exhibit accusative marking.<sup>32</sup> The following table is from Dixon (1994:85):

				Common nouns		
1st person pronouns	2nd person pronouns	Demonstratives 3rd person pronouns	Proper nouns	Human	Animate	Inanimate

This type of split may result from two distinct processes. One possibility is that abstract Case assignment is dependent on nominal-type. On such an analysis, for example, inherent ergative Case may not be assigned to first person external arguments, which then must receive nominative Case. A second possibility is that abstract Case assignment is uniform throughout: ergative on A, nominative on S, and accusative on O; only the morphological realization of these abstract Cases varies across nominal types. I argue that the second possibility is realized in a number of Pama-Nyungan languages, including Djapu, Kugu Nganhca, and Margany. Case mismatch data are shown to provide striking evidence for the analysis.<sup>33</sup>

Let us begin with Djapu (Yuulngu; data from Morphy 1983), a split ergative language with the split dependent on nominal type. Specifically, human and higher

animate nominals exhibit the full range of ergative, nominative and accusative case distinctions. In (40), the A argument galkay ‘sorcerer’ bears ergative, the O argument ba:pa’ngalin ‘father’ bears accusative, and the S argument Ngarritj appears in the unmarked nominative.

- (40) a. mak rlinygu-n galka-y’ ba:pa-’ngali-n dharpu-ngal  
 maybe already-IM sorcerer-ERG father-KinProp-ACC spear-Perf  
 ‘Maybe a sorcerer has already speared your father’ (Morphy 1983:111)
- b. Ngarritj nha:-ma wa:yin-gu  
 Ngarritj-NOM see-UNM animal-DAT  
 ‘Ngarritj is looking for animal(s)’ (Morphy 1983:38)

All other nominal types exhibit a more impoverished paradigm. Wh-words (with the exception of yol ‘who’), determiners/demonstratives, lower animates, and inanimates all exhibit ergative-absolutive marking. This is illustrated in (41) for the A dhandurrungdhu gatapangay ‘buffalo’s horn’, the S mutika ‘... rirrakay’ ‘sound of a car’, and the O bunhbu ‘shelter’.

- (41) a. dharpu-ngal ngarra-n dhandurrung-dhu gatapanga-y  
 pierce-PERF 1sg-ACC horn-ERG buffalo-ERG  
 ‘The buffalo’s horn has pierced me’ (Morphy 1983:127)
- b. mutika’ nhawi-yi-n rirrakay gärr-i-n dhipal  
 car-ABS whatsit-INCHO-PERF sound-ABS enter-PERF this-ALL  
 ‘the sound of a car has gone into this [tape recorder]’ (Morphy 1983:71)
- c. ngali djäma bunhbu djamarrkulhi-w’  
 1DUALINCL-NOM make shelter-ABS children-DAT  
 ‘We’ll make a shelter for the children’ (Morphy 1983:38)

Pronouns, on the other hand, show a nominative-accusative pattern. In (42), ‘he’ is the nominative ngayi when A or S, but the accusative nganya when O.

- (42) a. mirlipi ngayi yurru dharpu-ma-n garapa-y  
 shoulder.blade-ABS he-NOM FUT pierce-UNM-IM spear-INSTR  
 ‘He pierces the shoulder blade with a one-pronged spear’ (Morphy 1983:39)
- b. wanha-ngumi ngayi  
 where-LOC he-NOM  
 ‘Where is he?’ (Morphy 1983:34)
- c. yaka nhe nganya dhipali gurrunhu-rr barrku-ma  
 yaka you-NOM him-ACC that-ALL lay.down-POT far-ALL  
 ‘Don’t put him down way over there’ (Morphy 1983:102)

In Djapu, all elements of a DP, whether continuous or discontinuous, must be marked for case, and must all match in case. In (43a), all five elements of the DP bear dative morphology; in (43b), the two parts of the DP birrka'mirr rdung'rtung 'palpitating thing' match in absolutive and the two parts of the DP ngurikal-yi yolngu-wal 'that person' both show oblique morphology.

- (43) a. nganapurru-nggalangu-w djamarrkurli-w' yumurrku-w dhiya-ku  
1pl.Excl-OblS-DAT children-DAT small.pl-DAT this-DAT  
 Djapu-w  
 Djapu-DAT  
 'for these our small Djapu children' (Morphy 1983:123)
- b. bala ngayi ga:rri-nya-mara-m birrka'mirr  
 then he.NOM enter-NMLSR-CAUS-UNM anything.ABS  
 rdung'rtung ngurikal-yi yolngu-wal  
 palpitating.ABS that.OBL-ANAPH person-OBL  
 'Then he puts some other palpitating thing into that person' (Morphy 1983:40)

However, the combination of a demonstrative (ergative-absolutive), and a human noun (ergative-nominative-accusative) results in case mismatches. The DP ngunhi-ny-dhi yolngu-n 'that person' in (44) consists of a demonstrative marked as absolutive and a head noun marked as accusative. Similarly, the DP dhuwa nhe 'this you' combines a demonstrative marked as absolutive with a pronoun marked as nominative.

- (44) a. wungay' marrtji-nya ngunhi-ny-dhi yolngu-n  
 honey.ABS go-PAST.NONINDIC that.ABS-PRO-ANAPH person-ACC  
 wapirti-warrtju-na-puyngu-nha-ny weka-nha  
 stingray-spear.PL-NMLSR-INHAB-ACC-PRO give-PAST.NONINDIC  
 'We would go and give honey to those people who were spearing stingrays [lit 'to those stingray-spearing people']' (Morphy 1983:110)
- b. dhuwa nhe yurru lili dha:parng rongiyi-rr  
 this.ABS you.NOM FUT HITHER unsuccessful return-UNM  
 'YOU will return empty handed [but not I]' (Morphy 1983:84)

Such examples illustrate the absolutive as a morphological default for a subsection of the Djapu grammar: the demonstratives. Consider the lexical items that are relevant for the realization of ngunhi-ny-dhi yolngu-n 'that person'. Although the demonstrative and noun match in abstract accusative Case features, these are realized distinctly in the morphology. First consider the realization of 'person-ACC'. The noun is the invariant yolngu 'person'; a noun suffix does exist that realizes the accusative

Case feature on human nouns, -nha, and so this is inserted. To realize ‘that.ACC’, however, no lexical item is available that realizes the accusative Case feature on the demonstrative. This results in the insertion of the morphological default, ngunhi.<sup>34</sup>

- |                               |                                 |
|-------------------------------|---------------------------------|
| (45) Nominal case suffixes    | (46) ‘that’                     |
| [Accusative] ↔ -nha / human   | [Ergative] ↔ nguringi           |
| [Ablative] ↔ -galngur / human | [Dative] ↔ nguriki              |
| [Oblique] ↔ -gal /human       | [Originator] ↔ nguriking        |
| [Originator] ↔ -gungu / human | [Oblique] ↔ ngurikal            |
| [Ergative] ↔ -dhu / noun      | [Ablative] ↔ ngurikalangungur   |
| [Dative] ↔ -gu / noun         | [Associative] ↔ ngurikalanguwuy |
| (elsewhere) ↔ -∅ / noun       | (elsewhere) ↔ ngunhi            |

In sum, ergative, nominative, and accusative are all assigned in Djapu. However, the lack of a morphological realization for the accusative Case feature in the demonstratives results in the appearance of an ergative-absolutive pattern. Thus, absolutive as a morphological default is exhibited only in a section of the grammar.

Djapu is unlike Warlpiri, Enga, Niuean, and Hindi in exhibiting three distinct forms for a subset of the nominal types—the human and higher animate nouns. Kugu Nganhcara (Middle Paman, Smith & Johnson 2000), and Margany (Maric, Breen 1981) represent an intermediate step between the four ABS=DEF languages and Djapu. Kugu Nganhcara and Margany are like Warlpiri, Enga, Niuean, and Hindi in that no nominal type has distinct morphological realizations for all three of ergative, nominative, and accusative. They are like Djapu, however, in that although some nominal types show an ergative-absolutive pattern, other nominal types show a nominative-accusative pattern. In both Kugu Nganhca and Margany pronouns show nominative-accusative, while nouns, adjectives, and demonstratives show ergative-absolutive. However, case mismatches again indicate that all three Cases are indeed assigned in the syntax. These case mismatches result from the combination of pronouns, which inflect on a nominative-accusative paradigm, and nouns/adjectives/demonstratives, which inflect on an ergative-absolutive paradigm.

In Kugu Nganhcara, case morphology is obligatory on the final element of the DP (Smith & Johnson 2000:388, 421-423):

- (47) a. nhila            pama-ng  
           3.sg.NOM man-ERG  
           ‘the man’
- b. nhila            pama yoko-ng  
           3.sg.NOM man    big-ERG  
           ‘the big man’
- c. pula            pama yoko kuce-ng  
           3.du.NOM man    big    two-ERG

“the two big men” (Smith & Johnson 2000:422)

In addition, pronouns and demonstratives obligatorily show case marking, through (partial) suppletion and encliticization (Smith & Johnson 2000:388, 396, 397).

Case-mismatch situations result in Kugu Nghanhara from the optional placement of a pronoun initially in the DP.<sup>35</sup> This is seen in the examples above, and is further illustrated in (48) below with the DPs nhila pukpeng ‘the child’, nhunha kuyu ‘the woman’, and nhila pamang ‘the man’.

- (48) a. nhila      pukpe-ng nhunha kuyu      yuku muka-ng-nha  
           3sg.NOM child-ERG 3sg.ACC woman.ABS thing stone-ERG-3sgACC  
           peka  
           throw.at  
           ‘The child threw a stone at the woman’ (Smith & Johnson 2000:390)
- b. nhila      pama-ng nhingu pukpe-wu ku’a waa-ngu  
           3sg.NOM man-ERG 3sg.DAT child-DAT dog give-3sgDAT  
           ‘The man gave a dog to the child’ (Smith & Johnson 2000:401)

Consider the DP nhunha kuyu ‘the woman’, which combines an accusative pronoun with an absolutive noun.<sup>36</sup> This illustrates the absolutive as a morphological default for a subset of the grammar: the nouns. The grammar has the resources to realize the accusative Case feature on the pronoun, however, since the grammar lacks a morphological realization of the accusative Case feature on nouns, the morphological default must inserted, the “absolutive”. The relevant morphemes follow:

- |   |  |
|---|--|
| <p>(49) Nominal case suffixes</p> <p>[Ergative] ↔ -ng(u)<br/>         [Dative] ↔ -na / kinship, proper<br/>         [Dative] ↔ -wu<br/>         [Ablative] ↔ -nam, m<sup>37</sup><br/>         [Comitative] ↔ -ra<br/>         [Privative] ↔ -yi<br/>         [Locative] ↔ -ng(a), -n<sup>38</sup><br/>         [Vocative] ↔ -n<br/>         (elsewhere) ↔ -∅<br/>         (Smith &amp; Johnson 2000:389)</p> | <p>(50) ‘3sg pronoun/determiner’</p> <p>[Accusative] ↔ <u>nhunha</u><br/>         [Dative] ↔ <u>nhingu</u><br/>         [Ablative] ↔ <u>nhingurumu</u><br/>         [Comitative] ↔ <u>nhilara</u><br/>         [Privative] ↔ <u>nhilayi</u><br/>         [Locative] ↔ <u>nhilang(a)</u>, <u>nhilan</u><br/>         (elsewhere) ↔ <u>nhila</u><br/>         (Smith &amp; Johnson 2000:397)</p> |
|---|--|

These data also illustrate the use of the nominative pronoun as a morphological default. For example, the DP nhila pukpeng, combines a nominative pronoun with the ergative noun. The grammar provides a morphological realization of the ergative Case feature on the noun, but since the pronominal series lacks a distinct ergative form, the morphological default pronoun must be inserted, the “nominative”.

Identical case mismatches are found in Margany, illustrating both absolutive as the morphological default for nouns/adjectives/demonstratives, and nominative as the morphological default for pronouns. Three examples are provided here. In (51a) we see the split DP ‘I’ in the nominative and ‘young’ in the ergative; in (51b), we have a DP ‘alone’ in the ergative and ‘I’ in the nominative; and in (51c) we find the the split DP consisting of ‘he’ in nominative and ‘alone’ in absolutive.

- (51) a. matya ngaya      balga-nnganda-la yurdi,                      nhanga-nggu  
          before 1sg.NOM hit-HAB-PAST      meat/animal.ABS young-ERG  
          ‘I used to kill alot of kangaroos when I was young’ (Breen 1981:307, 336)
- b. gurruny-dyu ngaya      dhumba:nhi  
          alone-ERG    1sg.NOM build-RecPast  
          ‘I built it on my own’ (Breen 1981:342)
- c. nhula      waba:nhi      gurruny  
          3sg.NOM go-RecPast alone.ABS  
          ‘He would go on his own’ (Breen 1981:349)

Again these case mismatch data are explained by the lack of ergative morphology for pronouns, and the existence of ergative morphology for nouns:

- |  |  |
|--|--|
| <p>(52) Nominal case suffixes</p> <p>[Ergative] ↔ -nggu<br/>         [Dative] ↔ -gu<br/>         [Allative] ↔ -dhadi<br/>         [Ablative] ↔ -mundu<br/>         [Privative] ↔ -yi<br/>         [Locative-Proximate] ↔ -bitya<br/>         [Locative-Perlative] ↔ -marnrdi<br/>         [Locative] ↔ -ngga<br/>         (elsewhere) ↔ -∅<br/>         (Breen 1981:306-311)</p> | <p>(53) ‘1sg pronoun’</p> <p>[Accusative] ↔ ngaha<br/>         [Genitive] ↔ ngatyu<br/>         [Dative] ↔ ngatyungu<br/>         [Instrumental] ↔ ngatyundu<br/>         [Locative] ↔ ngatyunda<br/>         [Locative-Proximate] ↔ ngatyunbitya<br/>         [Allative] ↔ ngatyundhadi<br/>         [Ablative] ↔ ngatyunmundu<br/>         (elsewhere) ↔ ngaya<br/>         (Breen 1981:303)</p> |
|--|--|

To conclude this section, we have seen further evidence for absolutive as a morphological default from three split-ergative Pama-Nyungan languages: Djapu, Kugu Nganhcara, and Margany. In these three, absolutive functions as a morphological default for a subset of the nominal types, leading to case mismatches when nominal types are combined. These three are exemplars of a large class of Pama-Nyungan languages exhibiting this behaviour, a class which includes also Guugu Yimidhirr (Haviland 1979), Yidiny (Dixon 1977), Uradhi (Crowley 1983), the languages mentioned in footnote 33, and many others.



### 3.2 Split Ergativity and the Nominal Hierarchy

This type of split ergativity based on nominal type in Australian languages has figured prominently in the literature. Hence, I briefly consider in this section the implications of the data considered above for the analysis of the phenomenon.

Silverstein (1976) argues that these patterns of split ergativity found reflect a nominal hierarchy:

The noun phrases at the top of the hierarchy manifest nominative-accusative marking, while those at the bottom manifest ergative-absolutive case marking. Sometimes there is a middle ground which is a three-way system of O-A-S case-markings. (113)

Working in a Jakobsonian tradition, he defines his hierarchy based on morpho-semantic feature values (Silverstein 1976:122), where DPs with minus values are more likely to have ergative case marking, while DPs with plus values are more likely to have accusative case marking. A subset of the features defining his hierarchy follows:

- (54)
- |                 |                  |
|-----------------|------------------|
| Person          | Number           |
| $\pm 1$ (“ego”) | $\pm$ plural     |
| $\pm 2$ (“tu”)  | $\pm$ restricted |
| $\pm$ proper    |                  |
| $\pm$ human     |                  |
| $\pm$ animate   |                  |

His hierarchy is partially reproduced here (1976:112):

Acc	Erg				
+tu	-tu				
	+ego	-ego			‘pronouns’
		+proper	-proper		‘nouns’
			+human	-human	
				+animate	-animate
					...

Silverstein (1976:113) also comments that:

This hierarchy expresses the semantic naturalness for a lexically-specified noun phrase to function as agent of a true transitive verb, and inversely the naturalness of functioning as patient of such.

Proceeding naturally from this comment have been a variety of functional analyses that tie the presence of case marking to the likelihood of a DP-type to function as the subject/object (Comrie 1989, Dixon 1994, Moravcsik 1978, inter alia). For example:

the most natural kind of transitive construction is one where the A is high in animacy and definiteness, and the P is lower in animacy and definiteness; and any deviation from this pattern leads to a more marked construction [...] the construction which is more marked in terms of information flow should also be more marked formally” (Comrie 1989:128)

Those participants at the left-hand end of the hierarchy are most likely to be agents, to be in A function, and those at the right-hand end are most likely to be patients, to be in O function.<sup>[39]</sup> It is plainly most natural and economical to ‘mark’ a participant when it is in an unaccustomed role. (Dixon 1994:85)

Other researchers have pursued a diachronic approach, typically focusing on one aspect of the hierarchy (that is, marking of ergative or of accusative) (Garrett 1990, Givón 1994, Lightfoot 1999, *inter alia*). For example, Garrett (1990) argues that ergatives arise from the reanalysis of instrumentals, and are thus more likely to appear on inanimates than on animates.

Regardless of the merits of these analyses, the discussion from the preceding section demonstrates that they are at best incomplete. Analyses based on functional or historical concerns do not explain the appearance of a marked case morphology on a subpart of the DP, but not on other subparts. The importance in the synchronic grammar of the availability of case morphemes and the relationship between abstract Case and morphological case must be recognized.

Recent theoretical work has proposed a variety of grammatical explanations to this type of split ergativity; see Kiparsky (2004), Carnie (2005b) (building on Jelinek 1993), Alexiadou & Anagnostopoulou (2006). Although the details differ significantly, these analyses share the assumption that abstract Case is differentially assigned. In other words, when a DP in A function bears nominative rather than ergative, or when a DP in O function bears absolutive rather than accusative, these approaches provide motivations for a failure of abstract ergative/accusative Case assignment. In the preceding section, however, I argued that this type of split ergativity stems not from a difference in abstract Case assignment, but rather from a difference in morphological realization of abstract Case.

That is not to say that the differential Case assignment approach is uniformly incorrect. For some types of differential case marking, a differential Case assignment approach appears correct. Crucially, we find two clear types of behaviours between differential case marking resulting from differential morphological realization, and differential case assignment. As illustrated in the previous section, split case marking resulting from differential morphological realization, has the following properties: (i) when a nominal fails to bear a marked case, there is no marked case form for that

nominal in the language; (ii) differential case marking may be based on properties of lexical items that do not project to the DP as a whole (see for example the distinction between demonstratives and human nouns in Djapu discussed above); (iii) DP-internal mismatches in case morphology are possible. Split case marking based on differential Case assignment exhibits contrasting properties: (i) when a nominal fails to bear a marked case, there is typically a form of the marked case for that nominal in the language; (ii) differential case marking may only be based on properties that project to the DP as a whole; (iii) differential case marking may be based on elements outside the DP (for example, the choice of verb); (iv) DP-internal mismatches in case morphology are not possible. Hindi objects exhibit this second type of split case system.

In Hindi, objects bear either dative or absolutive (the latter being the morphological realization of abstract accusative Case, see section 2 above). The choice between the two is dependent on the animacy and specificity of the DP as a whole. An illustration follows:

- (55) ravii      gaay      / gaay-ko   k<sup>h</sup>ariidnaa   caahtaa   hai  
       Ravi.ABS cow.ABS   cow-DAT buy.NonFinite wish.Imperf be.Pres  
       ‘Ravi wishes to buy a cow (with no particular cow in mind) / a particular cow’ (Mohanani 1994:80-81)

Obviously the lack of dative morphology on gaay ‘cow’ on the non-specific interpretation is not due to the lack of an appropriate dative morpheme, since the dative morpheme appears on gaay in the specific interpretation. Furthermore, the choice between dative and absolutive is dependent on properties outside of the DP: the choice of lexical verb. Mohanani (1994:81) reports that the alternation between dative and absolutive objects “is available only to the objects of those verbs that are neutral to the animacy of their objects.” She illustrates with the verb ‘write’:

- (56) ilaa-ne   yah      k<sup>h</sup>at      / \*is      k<sup>h</sup>at-ko      lik<sup>h</sup>aa  
       Ila-ERG this.ABS letter.ABS   this.NonABS letter-DAT write-Perf  
       ‘Ila wrote this letter’ (Mohanani 1994:81)

Even when the object of ‘write’ is specific, it cannot bear dative. Thus, the differential case marking on objects in Hindi is determined not by the morphology available to the lexical item itself, as was the case in the Pama-Nyungan languages discussed above, but rather by the type of DP and the choice of verb. This type of differential case marking thus is conducive to an analysis based on differential Case assignment, unlike the Pama-Nyungan differential case marking.

In sum, the recent theoretical proposals regarding differential case marking based on the nominal hierarchy cannot be true for the Pama-Nyungan languages discussed

above, since these involve uniform abstract Case assignment followed by differential morphological realization of the Case features. They may, however, be correct for a distinct class of differential case marking, briefly mentioned here, that plausibly involves differential Case assignment.

The final type of synchronic approach to be considered is that of Aissen (1999, 2003). The core of Aissen’s analysis is the application of harmonic alignment in Optimality Theory (Prince & Smolensky 1993) to the following grammatical hierarchies:

- (57) a. Local > 3rd [Local = 1st, 2nd]
- b. Agent > Patient
- c. Subject > Nonsubject

The resulting constraints are then conjoined with a constraint punishing zero morphological realization,  $*\emptyset$ , and ranked with respect to a constraint punishing overt morphological realization,  $*\text{STRUC}$ . Thus, for example, the constraint rankings  $*\emptyset$  &  $*\text{Su}/3$  [third person subject]  $>> * \text{STRUC}$  will result in third person subjects bearing case marking; the constraint ranking  $* \text{STRUC} >> *\emptyset$  &  $*\text{Su}/\text{Local}$  will result in local (1st, 2nd person) subjects bearing no case morphology.

While couched in a different framework, Aissen’s approach shares with the approach proposed here a focus on differential morphological marking rather than differential abstract Case assignment. Furthermore, although abstract Case is not discussed in Aissen’s paper, it must be assumed to operate prior to the constraint application—the grammar must know which case should be marked/unmarked.<sup>40</sup>

As it stands, Aissen’s account cannot account for the case mismatch data discussed in this section. The properties she employs in the constraints for determining case marking are properties of the DP as a whole—theta role, grammatical relation, person, while the case mismatch data shows that properties of the lexical items themselves are crucial. In addition, Aissen’s approach provides for only faithful case marking, or no case marking at all (see Carnie 2005b for discussion on this point). For the languages considered here, the default realization (“absolutive” or “nominative”) is often non-identical with the stem (for pronouns and demonstratives), casting doubt on whether no case marking is an appropriate characterization. This certainly does not seem the correct characterization for languages like Niuean, with overt “absolutive” case morphemes.

It is important to notice that that Aissen’s account does not link the realization of case on a nominal type with the availability of case morphology for that nominal type. Thus, it would be accidental that when a nominal fails to bear accusative morphology in object position, it also fails to bear accusative morphology in all other potential environments: as the object of an adposition, as an applicative object, in the double object construction, and so on.

I leave for others to determine whether and in what way Aissen’s analysis may be modified to account for the data presented here.

In summary, the split ergative data considered in this section has significant implications for analyses of differential case marking based on the nominal hierarchy. Analyses that rely on differential Case assignment, while perhaps applicable to other types of differential case marking, cannot explain the Pama-Nyungan language data presented here. An analysis that focuses on differential morphological realization of abstract Case is required. The analysis proposed in this paper meets this requirement. An alternative morphological analysis, Aissen (1999, 2003), is insufficient as it stands, but may or may not be amendable.

In the following section, I discuss in more detail the claim that both abstract Case and morphological case are required, in contrast to Marantz (1991) and subsequent work in that tradition, which proposes to eliminate abstract Case.

## 4 The Necessity of Syntax in Case and Agreement

### 4.1 Case

In this paper, I propose that abstract Case features are determined in the syntax and realized in a post-syntactic morphology. In contrast, in an influential paper Marantz (1991) argues that abstract Case should be eliminated, and case morphology should be determined entirely in the morphology.

Abstract Case was famously first proposed by Jean-Roger Vergnaud in a (1977) letter to Noam Chomsky and Howard Lasnik. The goal of Vergnaud’s proposal was to explain the distribution of PRO versus a lexical DP. In a brilliant insight, Vergnaud pointed out that the environments in which a lexical DP is licensed are also the environments in which case is assigned in languages with case-rich morphology. Focusing on infinitival constructions, he proposed the following (Freidin & Lasnik 2006:22):

A structure of the form ... [ $\alpha$  ... NP ...] ..., where NP is in the Governed Case and  $\alpha$  is the first branching node above NP, is ungrammatical unless (i)  $\alpha$  is in the domain of [-N] or (ii)  $\alpha$  is adjacent to and in the domain of [-N].

In the following three decades, the concept of abstract Case has been a dramatic success, producing a rich literature and substantial improvement in our understanding of human language. The concept of abstract Case has not, however, provided a satisfying explanation for the distribution of PRO. (For recent work on the distribution of PRO, see for example, Chomsky & Lasnik 1993, Hornstein 1999, Landau 2000, Martin 2001, Hornstein 2001, Landou 2003.)

Against this background, Marantz’s (1991) paper (henceforth Mz91) proposes instead a type of “anti-licensing” condition, a condition that mandates the use of PRO (1991:245):

- (58) RES(Case Theory): an NP argument is PRO iff not governed at S-structure by a lexical item or [+tense] INFL.

The empirical motivation for the approach comes from Icelandic quirky case. In Icelandic, a DP that receives an inherent Case cannot appear in a position in which structural Case is not licensed (that is, the subject of nonfinite clauses that are not embedded under ECM predicates). Perhaps the most striking of these data (in that the use of PRO cannot be explained through properties of the matrix predicate) are nonfinite CPs in subject position, as discussed by Freidin & Sprouse (1991):

- (59) a. að PRO batna veikin er venjulegt  
           PRO.DAT to.recover.from the.disease.NOM is usual  
       b. \*að Jóni batna veikin er mikilvaegt  
           Jon.DAT to.recover.from the.disease.NOM is important  
           Freidin & Sprouse 1991:409

The problem posed by Icelandic is further complicated by the fact that data from agreement on floating quantifiers and participles appear to show that structural nominative Case is in fact licensed in nonfinite clauses in Icelandic (Sigurðsson 1991). For example, in (60), *stjórnina* ‘elected’ shows nominative case agreement with PRO; note that this case agreement cannot be with the controller of PRO, *strákanum* ‘the boys’, since it bears dative.

- (60) Strákanum leiddist [að PRO verða kosnir í stjórnina]  
       the.boys.DAT bored [to PRO.NOM be.INF elected.NOM to the.board]  
       ‘The boys were annoyed at being elected to the board’ (Sigurðsson 1991)

The presence of a nominative object in nonfinite clauses, as in (59) above, makes a similar point (although see Alexiadou (2003) and Sigurdsson (2000) for an alternative analysis invoking a low source for the nominative).

Recent work by Svenonius (2005) is also relevant. Svenonius argues that in standard quirky object examples like (61), the dative case on the object is actually structural Case. He shows for example that although the dative is retained in the passive, it is not in the unaccusative inchoative, middle, or adjectival form (data from Svenonius 2005):

- (61) a. Skipstjórinn sökkti skipinu  
       the.captain.NOM sank the.ship.DAT  
       ‘The captain sank the ship’

- b. Skipinu            var sökkt af skipstjóranum  
the.ship.DAT was sunk by the.captain  
‘The ship was sunk by the captain’
- c. Skipið            sökk  
the.ship.NOM sank  
‘The ship sank’

He argues that this is due to the presence of the dative-assigning  $\bar{y}$  head in the passive, and its absence in the middle/adjective, and relates this with the presence of an implicit subject in the passive but not the middle/adjective. See that work for details and additional arguments. If Svenonius is right, then even structural Case-marked DPs cannot appear in the subject position of nonfinite clauses in Icelandic:

- (62) a. að PRO            vera hjálpað er erfitt  
PRO.DAT to.be helped is difficult
- b. \*að Jóni            vera hjálpað er erfitt  
Jon.DAT to.be helped is difficult
- (Freidin & Sprouse 1991:410)

Let us take the Icelandic quirky Case data, and the three decades of struggle with PRO, to indicate that abstract Case does not neatly account for the distribution of PRO, at least on our present understanding. The question I would like to consider here is whether we should then proceed to dispense with abstract Case altogether. I submit that we should not. Abstract Case assigned in the syntax and realized in a post-syntactic morphology provides a better understanding of the distribution of cases than a purely morphological approach.

Let us begin with an outline of the morphological case assignment mechanisms proposed in Mz91. Mz91 states that a DP is realized in the highest case available to it in the following hierarchy (1991:247):

- (63) case realization disjunctive hierarchy
- a. lexically governed case
  - b. “dependent” case (accusative and ergative)
  - c. unmarked case (environment-sensitive)
  - d. default case

Lexically governed case includes inherent Case and the Icelandic-style quirky case. Dependent case is assigned under government by a complex head formed by the verb and INFL (1991:248):

- (64) Dependent case is assigned by V+I to a position governed by V+I when a distinct position governed by V+I is:
- a. not “marked” (not part of a chain governed by a lexical case determiner)
  - b. distinct from the chain being assigned dependent case
- Dependent case assigned up to subject: ergative  
 Dependent case assigned down to object: accusative

Unmarked case is the catch-all case assigned to DPs in a particular environment: for example, nominative in IP or genitive in DP. Finally, default case is realized on DPs in positions in which abstract Case would not be assigned.

Although it was important to attempt a purely morphological analysis, I deem the experiment unsuccessful. The morphological approach must rely upon syntactic mechanisms, rendering it minimally different from the standard syntactic approach; it does not yield additional empirical coverage or theoretical insight; and it sacrifices Vergnaud’s link between the syntactic licenser and the case borne by the DP.

Although the determination of case on the approach of Mz91 is situated in the morphological component, it is accomplished through purely syntactic mechanisms. Such an analysis is available, since Marantz assumes<sup>41</sup> that the input to the morphological component is a syntactic structure.<sup>42</sup> While this allows the morphological assignment of case to be syntactic in nature,<sup>43</sup> it does raise questions as to the content of the claim that case is morphological rather than syntactic. Consider the extent to which syntactic mechanisms are required in the determination of morphological case in the system of Mz91. As cited above, the licensing mechanisms for ergative and accusative case require government by the verb and I, and the case is assigned either upwards or downwards in the syntactic hierarchical structure.<sup>44</sup>

The role of syntactic structure is also found in the assignment of unmarked case. “Unmarked case may be sensitive to the syntactic environment; for example, in a language, GEN may be the unmarked case for NPs inside NPs (or DPs) while NOM may be the unmarked case inside IPs” (1991:247). The role of syntax in unmarked case must in fact be broader than this suggests. In ABS=NOM languages like Georgian only one DP per IP may bear nominative. Furthermore, which DP bears the unique nominative is determined based on the syntactic structure—the highest DP in the IP that does not bear inherent Case. This indicates that nominative is not a catch-all for DPs within an IP. Instead, like the dependent cases, nominative must be assigned to a DP by a unique case-assigning head based on the syntactic structure.

Lexical case is also assigned based on syntactic structure: government by a lexical-case assigning lexical item. In addition, recent work by Woolford (2006) argues that inherent Case (Mz91’s “lexical” case) must be decomposed into two types: (i) lexical Case, idiosyncratic Case assignment to internal arguments based on the choice of



predicate; (ii) inherent Case, systematic Case assignment to external arguments and goals, based on the structural position of these DPs in the specifier of a  $\bar{v}P$  projection. The empirical distinction Woolford identifies is syntactic, and would require adding additional syntactic mechanisms to Mz91: “lexical” case that is assigned to a DP chain with a tail in the specifier of certain  $\bar{v}Ps$ .

Furthermore, when a DP is assigned a case based on these syntactic mechanisms, the DP may not be occupying the appropriate position in the morphological component. In order to correctly assign case features to DPs that have undergone A'-movement, the morphology must have access to the distinction between A and A'-chains. Only with this distinction can an obvious ordering argument be avoided: since case features are determined by the position of a DP prior to a syntactic operation (A'-movement), case features must also be determined syntactically.

Although not discussed in Mz91, the morphological determination of case must also share with the present account a distinction between two layers of case assignment, one more abstract than the other. On the current proposal, case is determined in two steps: abstract Case features are assigned in the syntax, and then these Case features are realized in the morphology. In sections 2 and 3 above, I demonstrated that these two layers of case determination are indeed required. Specifically, ABS=DEF languages, including the Pama-Nyungan ABS=DEF languages that show DP-internal case mismatches, illustrate the need for a distinction between an abstract level of case and its surface realization. In order to account for these data, the single-step approach presented in Mz91 would need to be modified to incorporate both an abstract level of case assignment, and its morphological realization. The morphological determination of case proposed in Mz91 thus is not preferable on grounds of simplicity.

Even with case assigned using purely syntactic mechanisms, and two levels of case assignment, the analysis in Mz91 fails to achieve the empirical coverage of the system proposed here, that is standard syntactic determination of Case followed by morphological realization. I noted above that the morphology must access the distinction between A and A'-chains, to sidestep the ordering argument that case is assigned before A'-movement, A'-movement is syntactic, therefore case assignment is syntactic. However, access to A and A'-chains does not solve the ordering paradox for DPs that have undergone A-scrambling. A-scrambling of the object above INFL (T) does not change the case it bears. On a syntactic analysis, this is expected—the case on the object is determined before scrambling. However, for an analysis in which case is assigned in a post-syntactic morphological component like that of Mz91, correct case assignment becomes non-trivial.

In addition, in Mz91, the morphological determination of case is motivated by Marantz's “Ergative case generalization”, which is claimed to be morphological:<sup>45</sup>

(65) Ergative case generalization: Even when ergative case may go on the subject

of an intransitive clause, ergative case will not appear on a derived subject. (1991:236)

Noting the similarity to Burzio’s Generalization, Mz91 proposes that all case assignment is morphological. Mz91 later discusses that the analysis predicts exceptions to Burzio’s Generalization for predicates with two internal arguments (one serving as a case-competitor for the other), and illustrates examples in which the prediction is borne out. (The examples involve applicative constructions, which likely involve an additional case-assigning head.)

(66) Kichaga

‘M-ká n-ã-ĩ-lyì-í-ò k-èlyâ  
food AGRS-AGRO-eat-BEN-Pass wife

'Food is being eaten for the wife' (1991:239)

However, Mz91 identically predicts exceptions to the Ergative Generalization; indeed, the paper includes examples which seem to exhibit the requisite properties, and yet the prediction is not borne out:<sup>46</sup>

(67) Georgian

es    saxl-i            ivane-s    a-u-šendeb-a  
this house.NOM Ivan-DAT PreV-built-INFL

‘This house was built for Ivan’ (1991:235)

On the analysis adopted here, in contrast, the generalization is straightforwardly captured. Ergative is an inherent Case assigned by  $\bar{v}$  along with an external  $\theta$ -role to the DP base-generated in its specifier. Thus, only thematic subjects bear ergative Case.

Mz91 continues with the comment that “[i]f abstract Case is sufficiently distinct from morphological case, then Case theory might be entirely superfluous” (1991:240). However, the data discussed here indicate that abstract Case and morphological case, while non-identical, are tightly intertwined. If a morphological realization of an abstract Case feature is available, it must be inserted. Only when a morphological realization of a particular abstract case is not available do we find a distinction between abstract Case and morphological case. Indeed, we have seen in the case-mismatch data discussed in section 3 (an example from Kugu Nganhcara is repeated below), the requirement that abstract Case features be realized in the morphology as fully as possible cannot be overridden, even though this results in the parts of a single DP bearing different morphological cases.

- (68) nhila      pukpe-ng   nhunha   kuyu      yuku muka-ng-nha  
       3sg.NOM child-ERG 3sg.ACC woman.ABS thing stone-ERG-3sgACC  
       peka  
       throw.at

‘The child threw a stone at the woman’ (Smith & Johnson 2000:390)

Similarly, the distinction between abstract Case and morphological case in Warlpiri, Niuean, Enga, and Hindi discussed in section 2 (whereby abstract nominative Case and abstract accusative Case are realized morphologically as the default absolutive) is possible only because these languages lack distinct morphological realizations of accusative and nominative Case features. We do not find wanton dissociation between abstract Case and morphological case.

This leads us to the core difficulty with a Mz91-style theory, which is also the core distinction between such a theory and the one proposed here. A Mz91-style theory claims that there is no relationship between the morphological case borne by a DP and its syntactic licenser (i.e. the governor that allows it to escape the anti-licensing condition RES(CaseTheory) in (58) above). That is, it denies Vergnaud’s insight. In doing so, it throws the baby out with the bath water. As a general rule, the morphological case borne by a DP is determined by its syntactic licenser; this is sometimes determined by the category of the licenser—DPs licensed by ([+tense]) INFL (T) bear nominative, DP’s licensed by verbs bear accusative, DP’s licensed by nouns bear genitive or dative; other times it is determined by the lexical item itself, for example, in Georgian, a DP syntactically licensed by the postposition *semdeg* “after” bears genitive case, whereas a DP licensed by the postposition *tana* “at/near” bears dative case. If syntactic licensing and morphological case are unrelated phenomena, such robust generalizations are lost.

Let me summarize. Marantz 1991 (and subsequent work in the tradition) proposes that case is determined purely in the morphology. Abstract Case is eliminated, and a distinct mechanism of syntactic anti-licensing is proposed. The model encounters significant empirical problems. The model must also closely resemble the standard analysis in that the mechanisms used to assign case are entirely syntactic, and two levels of case must be posited, one more abstract than the other. The main distinction lies in the untenable claim that case morphology is unrelated to the syntactic licenser.

## 4.2 Agreement

In section 2.5 above, I demonstrated that the proposed analysis of ABS=DEF languages provides an explanation of the agreement patterns found in Warlpiri, Enga, Niuean, and Hindi. The explanation assumed an analysis of agreement in which

agreement features are established in the syntax based on the structural relation of closest c-command, and are subsequently realized in the morphology.

In contrast, recent work by Bobaljik (2006, henceforth B06) argues that agreement is a purely morphological phenomenon. Following Marantz (1991), B06 assumes that case marking is determined exclusively in the morphology; he claims that agreement must track morphological case, and therefore agreement must also be determined exclusively in the morphology. In the previous section, I pointed out serious difficulties with the assumption that case marking is determined exclusively in the morphology. Let us then focus on the claim in B06 that agreement must track morphological case.

The morphological determination of agreement in B06 consists of two parts, a syntactic locality condition and an accessibility hierarchy. The syntactic locality condition states that “[t]he finite verb agrees with the highest accessible NP in its domain” (2006:3), where the “domain” consists of the clause plus the edge of the next clause down, and “highest” refers to the syntactic structure. Whether a DP is accessible to agreement is determined based on a hierarchy that restates Moravcsik’s (1974) hierarchy (subject > object > indirect object > adverb) in terms of morphological case rather than grammatical function: “default case” (nominative/absolutive) > “dependent case” (accusative/ergative) > dative case (lexical). Thus, if a DP bearing morphological dative case triggers agreement, so will DPs bearing accusative, ergative, nominative, and absolutive. Similarly, if a DP bearing accusative or ergative triggers agreement, so will DPs bearing nominative or absolutive.

The locality condition proposed differs from the present model in two respects – it is based on highest in the clause, rather than closest c-command to an agreeing head; and it is claimed to operate in a post-syntactic morphology, rather than in the syntax.<sup>47</sup> The substantive difference in predictions thus pertains to an (accessible) DP which undergoes syntactic movement above an agreeing head.<sup>48</sup> On the approach of B06, this DP should trigger agreement as the highest DP in the morphological component. On the present analysis, such a DP should only trigger agreement if it is the highest DP c-commanded by the agreeing head at the point in the syntactic derivation when the agreeing head performs its search. A concrete example is found in Hindi scrambling, which moves a DP above T. As predicted by the present analysis, agreement is triggered by the absolutive subject, even when an absolutive object has scrambled above it.<sup>49</sup>

- (69) Kitaabē            anil            becegaa  
       book.F.pl.ABS Anil.M.ABS sell.Fut.Msg  
       ‘Anil will sell books.’

Let us turn now to the accessibility hierarchy proposed in B06, whereby the ability of a DP to trigger agreement is determined by its morphological case: nominative/absolutive > accusative/ergative > dative. B06 claims that this formulation

is required because when grammatical function and morphological case dissociate, agreement is determined by morphological case rather than grammatical function. Thus, in regards to agreement, Bobaljik states:

- (70) “When case and GF diverge, it is m[orphological]-case, not GF, that offers a more accurate typology” (B06:8).

B06 provides two types of evidence for this claim. The first is the generalization that no language shows agreement only with the ergative DP. On the proposal of B06, since absolutive/nominative are above ergative on the hierarchy, if a language shows agreement with the ergative, it must also show agreement with the nominative/absolutive. This generalization can also be captured without positing an accessibility hierarchy. All grammatical subjects enter a relationship with T, and thus potentially trigger subject agreement. This agreement may be blocked if the grammatical subject bears an inherent Case, ergative or dative, and so cannot receive nominative Case from T. There is no impediment, however, to the triggering of agreement in the standard relationship resulting in T licensing nominative Case on the grammatical subject.<sup>50</sup> Thus, we correctly predict not only that no language shows subject agreement only with ergative subjects,<sup>51</sup> but also that no language shows subject agreement only with dative subjects.<sup>52</sup>

The second piece of evidence presented in B06 for his claim that agreement necessarily tracks morphological case is the agreement pattern found in Icelandic quirky case constructions, mentioned in the previous section. These show agreement only with the nominative, which is taken in B06 as evidence for morphological-case based agreement. However, as discussed in 2.5 above, the languages that show agreement with only the absolutive/nominative are explained on the present account. This pattern of agreement straightforwardly obtains in a ABS=NOM language that disallows agreement with DPs bearing inherent Case features. The discussion of Hindi in section 2.5 above illustrates a second possible source for absolutive/nominative agreement: aggressive agreement, that is subject agreement that is not triggered by inherent Case-marked subjects, but otherwise is triggered by the highest nominal regardless of Case assignment.

Thus, the evidence presented in B06 do not provide support for an analysis whereby agreement relationships are established based on morphological case rather than based on syntactic structure. Empirical evidence can distinguish between the analyses, however.

Consider the ABS=DEF languages Warlpiri and Enga. These show subject agreement with both ergative A and absolutive S, but no subject agreement with absolutive O (in Enga O does not trigger agreement; in Warlpiri it triggers distinct object agreement). These thus constitute an example of the divergence of morphological case and grammatical function, wherein grammatical function<sup>53</sup> determines agreement rather

than case, in direct conflict with (70). Such languages are permitted in the system of B06, with the claim that both absolutes and ergatives can trigger agreement, the object failing to trigger agreement because the ergative is higher. (Although it's difficult to argue that for sentences like (71) in Warlpiri there isn't a parse for which the object janganpa 'possum' is highest in the clause, and so should trigger subject agreement:

- (71) Janganpa-rna paka-rnu ngajulu-rlu nguna-nja-kurra  
 possum-1sgSubj chop-Past I-ERG lie-Infin-ObjC  
 'I chopped out a possum while it was sleeping' (Hale et al 1995:1438) )

However, such languages do undermine the force of the claim in (70).

The ABS=DEF language Niuean presents additional difficulties. Subject agreement is triggered by only a subset of DPs bearing morphological absolute case—those that are intransitive grammatical subjects. The failure of objects to trigger subject agreement cannot be blamed on the presence of a higher accessible DP, because ergative DPs are not accessible in Niuean (do not trigger subject agreement). Rather agreement is not determined by morphological case. Instead, agreement is determined by syntactic, abstract Case – nominative Case.

Indeed, problems arise for the system of B06 even for languages that show nominative/absolute agreement, the type of agreement that was presented in B06 as an exemplar of morphological case based agreement. Consider Punjabi (e.g. Bhatia 1993, Butt 2005) and Marathi (Pandharipande 1997). These show basic case/agreement properties quite similar to Hindi, with split ergativity based on tense/aspect, and absolute agreement:

- (72) Punjabi  
 a. laRki muNDiã-ũ mar-di €  
 girl.ABS boy.M.pl-DAT hit-Pres.F.sg be.Pres.3.sg  
 "The girl is hitting the boys"  
 b. laRki-ne muNDiã-nũ mar-ia si  
 girl.F.sg-ERG boy.M.pl-DAT hit-Past.M.sg be.Past.3.sg  
 "The girl has hit the boys" (Butt 2005:186)

- (73) Marathi  
 a. mulii gaaNii mhaNtaat  
 girl.3pl.F.ABS song.3pl.N.ABS sing.Past.3pl.F  
 "Girls sing songs"  
 b. mulii-ne gaaNii mhaTlii  
 girl.3pl.F-ERG song.3pl.N.ABS sing.Past.3pl.N

“The girl sang songs” (Pandharipande 1997:284)

Importantly for the current discussion, they also exhibit split ergativity based on nominal type: in the perfective aspect, case morphology for first/second person pronouns in A position is absolutive rather than the expected ergative. Crucially, these DPs do not trigger agreement, despite being the highest absolutive in their clause:

(74) Punjabi

- a.  $t\ddot{u}$                        $lakRi$                        $vaD-i$   
you.F/M.ABS wood.F.sg.ABS cut-Past.F.sg  
“You (male or female) cut the wood”
- b.  $t\ddot{u}$                        $kampuTar$                        $bec^h-ia$   
you.F/M.ABS computer.M.sg.ABS sell-Past.M.sg  
“You (male or female) sold the computer” (Butt 2005:187)

(75) Marathi

- $mii/$      $aamhii/$      $tuu/$                        $tuumhii$      $gaaNii$                        $mhaTlii$   
I.ABS/ we.ABS/ you.sg.ABS/ you.pl.ABS song.3pl.N.ABS sing.Past.3pl.N  
“I/we/you sang songs” (Pandharipande 1997:131)

Therefore, the correct generalization is demonstrably not based on morphological case: agreement is not triggered by the highest DP bearing absolutive case, but rather the highest DP bearing structural abstract Case. In (74) and (75), the highest DPs bearing morphological absolutive bear abstract inherent ergative Case, and thus do not trigger agreement. The data speak strongly against a purely morphological analysis of agreement.

In sum, Bobaljik proposes that agreement is determined by morphological case marking. In contrast, the present paper proposes that agreement relationships are established in the syntax based on closest c-command and realized in the morphology. Bobaljik’s proposal contains two parts: first, an accessibility hierarchy based on morphological case, determining which DPs are able to trigger agreement; second a locality condition whereby the highest accessible DP in the clause at PF triggers agreement. Exactly where Bobaljik’s theory makes different predictions from the present proposal do the predictions fail to be realized.

To conclude, these two subsections have supported the general approach of this paper whereby case and agreement relationships are established in the syntax and realized in the morphology. To wait until the morphology to do case and agreement is to wait too long.

## 5 Conclusion

In this paper, I have argued that abstract Case and agreement relationships are established in the syntax and realized in the morphology, this realization being as faithful as allowed by the morphological resources of the language. The main empirical basis has been a class of prima facie ergative-absolutive languages that lack absolutive as either an abstract Case or a morphological case. What has been called the absolutive is instead the morphological default case, inserted when a specific realization of the abstract Case feature is unavailable. The analysis was supported by differential case marking based on the nominal hierarchy, which was also shown to have a morphological source. Finally, the analysis was argued to favorably compare to analyses which place all determination of case and agreement into the morphology.

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217 Morrill Hall  
Department of Linguistics  
Cornell University  
Ithaca, NY 14853

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<sup>2</sup>See Aissen 2003 for a morphological approach using Optimality Theory.

<sup>3</sup>Not m-command.

<sup>4</sup>For alternative analyses of ergativity in these languages see *inter alia*: for Warlpiri, Simpson 1983, Bittner & Hale (1996a,b); for Niuean, Massam (2006); for Enga, Li & Lang (1979), van Valin (1981); and for Hindi, Mahajan (1990, 2000), Mohanan (1994), Davison (2003), Butt & King (2004), Arnand & Nevins (2005).

A reviewer asks about the relationship between the analysis proposed here and Bittner & Hale's analysis. For Bittner & Hale, absolutive is nominative, where both are analysed as the lack of Case (more specifically the lack of a Case projection, KP). This is perhaps similar to the present approach which considers absolutive to be morphology that does not realize Case features, although on the present account absolutives do have Case. A significant difference between Bittner & Hale's analysis and the proposed analysis is that for Bittner & Hale, all absolutives are licensed identically, through government by C (or the Case head K in gerunds). On the proposed analysis, absolutive on S is licensed by T, whereas absolutive on O is licensed by v. This distinction becomes important in gerunds, which lack T but contain v. See section 2.3 for discussion. Licensing of ergative is also different in the two systems – for Bittner & Hale, ergative is licensed by I [T], whereas for me, ergative is inherent Case licensed by v. This contrast is also important in gerunds, which lack T but contain v see section 2.3. Bittner & Hale's system does not provide for a non-identical relationship between abstract Case and morphological case, and thus their system could not extend to the data considered in section 3.

While Bittner & Hale claim that the subject is licensed in situ in Warlpiri, there is evidence for

a grammatical subject (as distinct from the thematic subject) (see for example Hale 1983, Simpson & Bresnan 1983, Bittner & Hale 1996b, Legate 2002b, 2003b). Thus, Bittner & Hale propose EPP-driven movement of the single argument of unaccusative verbs to adjoin to VP, the position where they generate thematic subjects. This is also the position that they associate generally with the requirement of the Extended Projection Principle that clauses require subjects. On the present assumption that the EPP requirement is associated with the specifier of TP, this means that subjects in Warlpiri raise to the specifier of TP (see also Legate 2002b, 2003b). Bittner & Hale provide one argument for this position being inside VP (other arguments concern the posited coindexation relationship between INFL and V): that absolutive subjects may scope below VP-level adverbial preverbs, (76). Such data are compatible with EPP-driven movement to the specifier of TP, on the now-standard assumption that A-movement may undergo reconstruction.

- (76) Kurdu jinta ka yarda-yula-mi  
child one.ABS PresImpf again-cry-Npast  
 ‘Again, some child is crying.’ OR  
 ‘There is some child who is again crying.’ (Bittner & Hale 1996b:567)

Finally, the two types of ergative languages identified by Bittner & Hale (1996b)—raising and transparent, do not correspond to the two types of ergative languages discussed here—ABS=DEF and ABS=NOM. For Bittner & Hale, the defining characteristic is that raising languages like Inuit exhibit syntactic ergativity, while transparent languages like Warlpiri do not. The availability of syntactic ergativity, however, seems to cut across my two types. For example, Dyirbal, famous for its syntactic ergativity, would be classified as an ABS=DEF language on my analysis. I leave syntactic ergativity for future work.

<sup>5</sup>A reviewer asks about locality issues in the assignment of nominative Case to the object past the intervening inherent Case-marked subject. I assume that after T locates the ergative subject and raises it to the specifier of TP for EPP, T continues to search from the position of the thematic subject. This continuation of search is more economical than repeating the search on the portion of the tree previously examined. It is invoked previously, for example, in Legate 2003a, 2004, and is related to approaches in Anagnostopoulou 2003, Anand & Nevins 2005 (which refers to “punting”), Chomsky 2000, 2001a, 2001b, and Hiraiwa 2001 (which invokes simultaneity).

<sup>6</sup>A reviewer suggests that the distinction need not be defined for a language in its entirety. A language may exhibit multiple *v* heads with different properties.

<sup>7</sup>A reviewer observes that the proposed analysis must stipulate that in ABS=DEF languages transitive *v* assigns ergative whereas intransitive *v* does not. As mentioned in the text below, this distinction between transitive and intransitive verbs is found in many ergative languages, but not all. In some ergative languages, inherent ergative is assigned to all thematic subjects, regardless of transitivity; such languages are often labelled “active-stative” or “split-S.” Given the language variation on this point, any analysis of ergativity must posit extra mechanisms to allow for both possibilities. In the minimalist framework I assume, language variation is handled by positing differences in the properties of functional items, like *v* (see for example Chomsky 1995, Borer 2005a,b). In the markedness-based theory of ergativity of Marantz (1991), discussed in section 4.1 below, the posited trace of object noun incorporation into unergative verbs “counts” as a distinct position for case assignment in some languages but not others (see also Laka 1993). In Optimality Theoretic approaches (the reviewer mentions Woolford 2003), the variation is handled through positing constraints and reranking them across languages. For example, Woolford (2003) analyses the distinction between Icelandic, which has nominative objects with non-nominative subjects, and Faroese, which has accusative objects with non-nominative subjects, by positing a constraint punishing multiple



DPs within a single case checking domain and ranking this above (Faroese) or below (Icelandic) a constraint punishing accusative case (although this approach does not extend to passives in Faroese, as she notes). The choice between these approaches to language variation seems to be the choice between frameworks.

<sup>8</sup>The interested reader can find the Georgian paradigm in Aronson 1982 (460).

<sup>9</sup>-ngku and -ngka appear on stems of two morae.

<sup>10</sup>The ergative e on proper names and the “absolutive” e on common nouns are historically distinct and are standardly considered synchronically distinct as well. The ergative he, locative he and possessive he on common nouns should be analysed as a single morpheme, but this is not crucial for the present discussion. See Legate 2006.

<sup>11</sup>The ergative is also used for the instrumental; this is a common syncretism in ergative languages (and true also of Warlpiri). See Legate 2006.

<sup>12</sup>See Schütze 2001 for discussion; the notion of morphological default case employed here corresponds to what Schütze refers to as “Elsewhere Insertion”.

<sup>13</sup>In some languages, hanging topics agree in case with the associated clause-internal DP, optionally or obligatorily. When such case agreement occurs, the construction is unrevealing as to the default morphological realization of case. Thus, I focus on hanging topics without case agreement.

<sup>14</sup>A reviewer wonders about hanging topic left dislocation in Georgian. Lea Nash (personal communication June 2, 2005) indicates that the construction is unfortunately not found in Georgian. However, the Georgian facts are not crucial to the point I am making here. My point is that the hanging topic left dislocation data support my claim that in Warlpiri, Niuean, Enga, and Hindi the absolutive is the morphological default. I have no data regarding the morphological default, if any, in Georgian, and make no claims on this matter.

<sup>15</sup>Unfortunately, the associated position in the clause also bears absolutive, thus a case agreement analysis cannot be ruled out. See footnote 13.

<sup>16</sup>Independent support for a distinction between absolutive on S and absolutive on O comes from Aldridge (2004), who proposes that in certain Austronesian languages absolutive is assigned by T to S but by v to O. However, Aldridge’s analysis is purely syntactic, and thus cannot account for the data considered here; in particular, the role of morphological realization based on the Elsewhere Condition is crucial for the data in section 2.4 on additional absolutive DPs, and for the Pama-Nyungan split ergativity data in section 3. Thank you to John Whitman for pointing out the relevance of Aldridge’s work.

<sup>17</sup>See Nash (1980) and Simpson (1991) for evidence of nominalization. One piece of evidence comes from reduplication: nonfinite forms of the verb undergo both the verbal reduplication pattern (reduplication of the first two syllables), and the nominal reduplication pattern (reduplication of the entire stem). Another piece of evidence is that nonfinite clauses bear case suffixes.

<sup>18</sup>Simpson (1991:107) reports that rare examples are found, but that such phrases are judged ungrammatical. This judgement is shared by my consultants, who unequivocally rejected absolutive subjects in nonfinite phrases.

<sup>19</sup>Mary Laughren (personal communication) notes that some speakers only allow the dative. For those speakers, nominalization must occur immediately above v.

<sup>20</sup>Unfortunately, data are not available on overt A in nonfinite clauses.

<sup>21</sup>Diane Massam, personal communication (March 9, 2006), points out that Niuean also has a construction like Warlpiri involving nominalization. These potentially could be used to test the prediction, however she notes that the facts are unclear and field work has proven difficult, since many speakers dislike the construction.

<sup>22</sup>Davison (2003) demonstrates that this requirement is syntactic, not semantic. Thus, counterfactual clauses with imperfective aspect but perfective interpretation do not allow ergative.

<sup>23</sup>Another is the infinitive (traditionally termed the “future participle in adverbial case”, used for purpose clauses with PRO subjects. In these as well, O cannot bear absolutive, and must instead be genitive (see, for example, Hewitt 1987:155).

<sup>24</sup>Further research is required to explain the inability of series I predicates to undergo higher nominalization; see discussion of Georgian split ergativity in 2.4 below.

<sup>25</sup>Although when the object of a benefactive or comitative preposition is a proper name, the absolutive is  $\emptyset$ . This seems phonologically motivated for benefactives, although not for comitatives. A reviewer correctly notes that the goal preposition ke is different in that it assigns locative Case to its complement, which has a distinct morphological realization.

<sup>26</sup>Double objects and applicative objects in Warlpiri receive dative case, which has a distinct morphological realization (-ku).

<sup>27</sup>A third series, typically referred to as the “Inversion”, shows a dative-nominative-genitive pattern. Analysis of this series is beyond the scope of this paper, see Hewitt 1987, Harris 1981, Anderson 1986, 1992, Halle & Marantz 1993, among others for discussion. However, this series does accord with my claim that only one DP per clause may bear absolutive (=nominative) in Georgian.

<sup>28</sup>The variation is potentially more fine-grained, with different inherent cases behaving differently in a single language.

<sup>29</sup>Limited, distinct object agreement appears in Enga with benefactives. The benefactive marker on the verb is -k for 1st and 2nd person beneficiaries, and kamaɪ for 3rd person beneficiaries. This does not affect the discussion of subject agreement in the text.

<sup>30</sup>The agreement facts in Niuean are complicated by the existence of lexical exceptions; Seiter (1980:61-65) reports two verbs that allow agreement with A, and a small class of verbs that allow agreement with O (he provides two). See that work for details.

<sup>31</sup>Thus I agree entirely with Bhatt’s (2005) AGREE analysis, excepting his assumption that it is the lack of overt case morphology on a DP which makes it eligible to trigger agreement in Hindi. On the present account, agreement relationships are determined in the syntax whereas morphological realization of case is determined in a post-syntactic morphology on the PF branch of the derivation. Thus, case morphology cannot affect agreement relationships. See below for supporting evidence.

<sup>32</sup>See section 3.2 for more discussion.

<sup>33</sup>After three revisions of this paper, I found an excellent paper by Goddard (1982) in which the arguments in this section are prefigured. Goddard looks at Dhalandji, Pitta Pitta, Diyari, Yidiny, Dyirbal, Kala Lagaw Ya, and the Yankunytjatjara dialect of Western Desert, arguing that they are languages with ergative-nominative-accusative Case but ergative-absolutive case marking. Unfortunately, Goddard’s paper does not seem to have informed the recent theoretical discussion on this type of split ergativity. It is my hope that the importance of the data from Pama-Nyungan languages discussed this section and in Goddard’s paper will be recognized.

Goddard also mentions Warlpiri as follows:

A smaller number of languages, including Warlpiri, Walmatjari, and the Pintupi dialect of the Western Desert Language, have both nouns and pronouns showing two distinct forms only (one for S/O, one for A) and bound pronouns alone [agreement], of all the nominals, showing the converse two form split (i.e. S/A vs O). I will not address these types directly, though it may be possible to adapt the following argument to them also.  
(179)

Section 2 above has shown that it is indeed possible and desirable.

His summary is exactly on the mark:

Another way of putting the point I am making here is that true absolutive case (i.e. a case value which applies to all nominals in S and O context) is very rare indeed. The whole thrust of this paper has been to show that what is usually called ‘absolutive case’ is not a CASE at all. Rather, ‘absolutive’ generally refers to a PATTERN OF CASE MARKING that occurs frequently in Australia (183)

and indeed, as I have demonstrated in this paper, outside of Australia as well.

<sup>34</sup>These are the underlying forms posited by Morphy; phonological considerations result in the surface pronunciations.

<sup>35</sup>The examples provided by Smith & Johnson (2000) suggest that this may be an optional definiteness marker, and thus perhaps that the pronoun is evolving towards a determiner. More investigation is required to substantiate this speculation.

<sup>36</sup>A reviewer wonders if it is appropriate to label the noun *kuyu* ‘woman’ absolutive here, rather than caseless. The absolutive label is deemed more appropriate here for two reasons. First, the noun is occupying a position that requires case morphology in the language—the final element of the DP. Second, a caseless analysis would fail to explain the full range of data; for example, the behaviour of the pronouns, for which the nominative and stem form are distinct.

The reviewer also asks about the relationship between this type of case mismatch and the patterns of syncretism found in more familiar Indo-European languages. Indeed this relationship should be drawn. For example, Calabrese (2006) discusses Latin, where nouns of the first declension show syncretism between the genitive and dative, while adjectives of the third declension show a morphological distinction between the genitive and dative. Thus, when a third declension adjective modifies a first declension noun, the adjective shows the case of the DP more faithfully than the head noun (Calabrese 2006:9):

(77)	tristis	puellae	tristí	puellae
	sad. <u>GEN</u>	girl. <u>GEN/DAT</u>	sad. <u>DAT</u>	girl. <u>GEN/DAT</u>
	‘of the sad girl’		‘to the sad girl’	

On the present analysis of the Pama-Nyungan data, syncretisms like those found in Latin and the Pama-Nyungan case mismatch data are instances of the same phenomenon.

<sup>37</sup>There is some variation in the use of allomorphs of the ablative, -nam more likely with kinship and proper names (Smith & Johnson 2000:392). The dative appears as the stem for the ablative of kinship and proper names.

<sup>38</sup>These locative forms are in free variation (Smith & Johnson 2000:395).

<sup>39</sup>A few phonologically-conditioned allomorphs have been ignored for simplicity.

<sup>40</sup>This cannot be taken as a statistical fact, see Wierzbicka (1981), cited in Jelinek (1993)

<sup>41</sup>Indeed, taking seriously the role of abstract Case solves a problem Aissen noted for her approach: that the subjects of intransitives fail to bear ergative Case (she was discussing Dyirbal). This is a fact of abstract Case assignment rather than realization, and so appropriately falls outside the constraint ranking.

<sup>42</sup>As do I, following the Distributed Morphology framework developed by Alec Marantz and Morris Hale.

<sup>43</sup>Specifically, the structure of the derivation at the point of the bifurcation to PF and LF; this point is referred to as Spellout, and was previously referred to as S-structure.

<sup>44</sup>The same reliance on syntax is found in Bobaljik’s (2006) morphological determination of agreement, see section 4.2 below.

<sup>45</sup>These syntactic mechanisms likely should be updated, and modified to allow for VP-internal subjects, but these should be minor issues.

<sup>45</sup>As evidence, Mz91 notes that both ergative and nominative subjects in Georgian trigger subject agreement. Assuming that agreement is identical to syntactic licensing, this led to the conclusion that the distinction between ergative and nominative case must be morphological rather than syntactic. See section 2.5 for an alternative analysis of such data.

<sup>46</sup>Note that the dative on objects in Georgian often behaves as an accusative. The ideal test case would be an ergative language that has both a passive and a double object construction in which both DPs bear accusative. I predict that when the double object construction is passived, the subject will bear nominative/absolutive; Mz91 predicts that it will bear ergative. Unfortunately, I have yet to find a test language.

<sup>47</sup>The use of a domain consisting of a single clause plus the edge of the lower clause is quite close to the notion of a phase (Chomsky 2000, 2001a, 2001b) (as recognized in B06:3, ftn4). I set aside this aspect of the locality condition, which is orthogonal to the distinctions discussed in the text.

<sup>48</sup>The data discussed in B06 regarding domains consists of Long Distance Agreement (for details, see Bruening 2001 (for Passamaquoddy), Polinsky & Potsdam 2001 and Polinsky 2003 (for Tsez), Branigan & MacKenzie 2002 (for Innu-aimn), Bhatt 2003 (for Hindi)). These data consist of a DP in an embedded clause triggering agreement on a higher verb; for the first three languages, this agreement is facilitated by movement of the DP to the edge of the embedded clause. This type of example does not differentiate between Bobaljik's morphological analysis and a closest c-command analysis, since the DP in the embedded clause is both the highest DP in the domain and the DP under closest c-command by the agreeing head.

<sup>49</sup>Thank you to Pranav Anand for help with the Hindi data.

<sup>50</sup>A reviewer wonders how grammatical subject is defined, given that Bittner & Hale 1996b reject EPP-driven movement to the specifier of TP for Warlpiri. Bittner & Hale do, however, posit a grammatical subject position, differing with the present approach in identifying this position as adjoined to VP. See footnote 4 above for further discussion. However, the point made in the text regarding agreement would hold even of a language without the EPP. If in situ DPs in such a language failed to trigger agreement, this would be equally true of ergatives as nominatives. The result is the same: if ergatives agree, nominatives agree as well. See footnote 51 for related discussion.

<sup>51</sup>A reviewer points out a potential source for ergative-only agreement. A language could have ergative-only agreement if it (i) only exhibited subject agreement, not object agreement; (ii) allowed agreement with ergative subjects; and (iii) lacked nominative subjects entirely. Property (iii) is unattested, likely ruled out by considerations of Universal Grammar and acquisition.

<sup>52</sup>Since inherent Case marking may block agreement, we could formulate an accessibility hierarchy for agreement in terms of abstract Case rather than morphological case: structural > inherent. That is, if a language allows agreement with a DP bearing an inherent Case feature, it also allows agreement with a DP bearing a structural Case feature. However, this hierarchy is purely derivative, and need not be stated anywhere in the grammar.

<sup>53</sup>Note that I take grammatical function to be a derivative notion (see McCloskey 1997).