

## On the parametric variation of case and agreement and its implications for (non)-configurationality

**ABSTRACT:** The paper argues that case and agreement features are subject to parametric variation and explores the consequences of this claim with a particular attention to word order. Departing from the Universal Approach adopted in much generative work (Rouveret and Vergnaud 1980; Chomsky 1981, 1995, 2000, 2001; Harley 1995; Bittner and Hale 1996; Sigurdsson 2003), I argue that languages can choose to have case features, phi-features, some combination of the two or none at all. Retaining the Minimalist assumption that the probe (T / v) must perform a deletion in return for phi-feature valuation (Chomsky 2000, 2001), while leaving out the assumption that the goal needs to have an undeleted case feature (Chomsky 2005), I propose that the probe is an indiscriminate deleter. It will delete the NP's interpretable features to get its own phi-features valued. As a consequence of indiscriminate deletion, languages without case features, but with agreement features will be non-configurational. These include Mohawk, Kinande, and Chichewa. In contrast, languages with case features may allow but not require NP dislocation in the presence of agreement. These are all of the Indo-European languages, Japanese, and Nahuatl. Finally, languages that lack both case and agreement features are predicted to have a rigid word order. In addition, the paper addresses a number of phenomena that pose a problem for the Universal Approach. These include locative inversion and inverse voice constructions in Bantu languages, the distribution of subject anaphors in Japanese, and the non-co-occurrence of overt accusative case with overt object agreement.

### 1. Introduction.

The view that case and agreement features are universal properties of language, while their morphological realization is language-specific is a standard one in syntactic theory. The strongly universalist position, referred to in Sigurdsson (2003) as the Universal Approach (UA), has been either explicitly stated or presupposed in most generative work (Rouveret and Vergnaud 1980; Chomsky 1981, 1995, 2000, 2001; Harley 1995; Bittner and Hale 1996; Sigurdsson 2003). The idea that case is universal dates back to the early 80's (Rouveret and Vergnaud 1980, Chomsky 1981) and has become a rarely questioned assumption among syntacticians. The view that agreement features are universal is more recent, however. Yet, it appears to be implicit in much Minimalist work done since the 90's and is stated explicitly in Sigurdsson (2003, 2006). For example, the existence of phi-features on v has been assumed for English in Chomsky (2000, 2001) and Legate (2003) and for Russian in Levine and Freidin (2001), despite the fact that neither of these languages shows object agreement in transitive sentences with agreeing subjects.

Clearly, case and agreement *morphology* is not universal. There are many languages that mark only agreement (Mohawk, Chichewa) shown in (1a,b) and (2); only case (Japanese, Yidin<sup>y</sup>) (3,4); some mixture of the two (Russian, West Greenlandic) (5,6); or nothing at all (Chinese) (7): MOHAWK (from Baker 1996, p. 116) (*Agreement only; obligatory agreement with thematic arguments*)

(1) a. Sak rake-nuhwe'-s  
Sak MsS/1sO-like-hab  
Sak likes me

b. Sak ri-nuhwe'-s

- Sak 1s/MsO-like-hab  
I like Sak
- CHICHEWA (BANTU) (from Bresnan and Mchombo 1987) (*Agreement only; optional object agreement*)
- (2) Alenjje zi- na- (wa-) lum- a njuchi  
Hunters SM past OM bite- INDIC bees  
Bees bit the hunters
- JAPANESE (*Case only: nominative-accusative*)
- (3) Taro-ga pizza-o tabe-ta  
Taro-NOM pizza-ACC eat-past  
Taro ate pizza
- YIDIN<sup>y</sup>
- (4) Waguja-ngu jugi-0 gunda-l (Dixon 1994: 59) (*Case only: ergative-absolutive*)  
Man-ERG tree-ABS cut-pres  
The man is cutting a tree
- RUSSIAN (*Case and agreement; nominative-accusative*)
- (5) Homer udaril Bart-a  
Homer hit-3<sup>rd</sup>-SgMascBart-ACC  
Homer hit Bart
- WEST GREENLANDIC (data from Manning 1996: 3) (*Case and agreement; ergative-absolutive*)
- (6) Oli-p neqi neri-vaa  
Oli-ERG meat-ABS eat-ind-tr-3<sup>rd</sup>-SG-3<sup>rd</sup>-SG  
Oli eats meat
- CHINESE (from Sigurdsson 2003) (*No case and no agreement*)
- (7) Ta bu chi rou  
She/he not eat meat  
She/he does not eat meat

The above is but a drop in the ocean of morphological diversity of case and agreement systems of the world's languages (cf Nichols 1986, 1992; Blake 1994). However, the fact that languages vary so much with respect to their case and agreement morphology has not been considered a challenge to the Universal Approach, whose central idea is that uninterpretable features are abstract universal properties of *syntax* that may or may not be overtly realized in a given language.

In this paper I depart from the Universal Approach and argue following XXXX (2005a,b) that much can be gained by taking the above morphological diversity to reflect the fact that case and agreement features vary parametrically. I further argue that overt realization of uninterpretable features is principally related to the syntactic operations responsible for legitimizing them.<sup>1</sup> Initial support for the proposal that morphological spell-out of case and agreement features is non-arbitrarily related to the underlying syntax comes from the existence of such univer-

<sup>1</sup> The proposal that the morphological realization of syntactic features is significant is not without precedent. Proposals concerning the relevance of morphology to syntactic operations include, among many others, the view that the morphological make up of wh-words may affect their syntax (Cheng 1991), the influence of morphology on quantification (Tsai 1999: 58), and the proposal in Huang (1982) that the absence of AGR on the INFL in Chinese allows subject anaphors in finite clauses. Yet, the treatment of phi-features and case features as universal has persisted. This paper addresses a number of problems with this position.

sals as “A language that has overt agreement with the object, has overt agreement with the subject” and “A language that has overt subject case, has overt object case”(Croft 1990; Moravcsik 1974, 1978; Lehmann 1982, Greenberg 1966; Woolford 1999a; Bobaljik 2005). If there was no principled relationship between the syntax of case and agreement and its spell-out, such universals would be unexpected. Second, a theory that takes morphological spell-out to be a reflection of the underlying syntax is in a lesser danger of positing null morphemes without independent evidence for their existence, and hence is more empirically accurate. Third, as will be shown in the course of the discussion, treating case and agreement features as parametrically variant offers a way to explain such phenomena as the distribution of subject anaphors in finite clauses, agreement in locative inversion and OVS constructions in Bantu languages, and furthermore, has consequences for deriving a range of effects related to non-configurationality. In fact, a theme that resonates throughout the paper concerns the question of how the presence vs. absence of case features in the presence of agreement features interacts with word order freedom. Specifically, I argue that a language that lacks case features but has agreement features will have obligatory dislocation of overt NPs, while languages that have both case and agreement features may allow, but never require NP dislocation.

The paper is organized as follows. Section 2 lays out the basic premises of the proposal and argues that obligatory dislocation of overt NPs in Mohawk (Baker 1996) -- a language that lacks case morphology and has overt subject and object agreement -- is explained if we take the morphological caselessness of this language to reflect that the language has no case features. Section 3 extends the account to Bantu languages that also have obligatory dislocation of agreed-with NPs (Baker 2003a). Section 4 addresses languages that have both case and agreement features. Section 5 discusses Japanese, an agreementless language, with a special attention to subject anaphor distribution. Section 6 turns to Chinese, a language that I argue to lack case and agreement features. Section 7 is the conclusion.

## 2 On caselessness and non-configurationality

### 2.1 Mohawk

The discussion in this section will be limited to Mohawk, although many arguments can be generalized to other morphologically caseless polysynthetic languages discussed extensively in Baker (1996). Polysynthetic languages are non-configurational in the sense of Hale (1983), Baker, (1996), and Jelinek (1984) – they involve NPs appearing in dislocated positions.<sup>2</sup> Before we begin, some background is in order. Baker (1996) proposes that a number of languages obey what he calls ‘the Polysynthesis Parameter’, also referred as the Morphological Visibility Condition (MVC) stated in (8).

(8) MVC (Baker 1996, p.17)

*A phrase X is visible for theta-assignment from a head Y only if it is co-indexed with a morpheme in the word containing Y via: (i) an agreement relationship; (ii) a movement relationship.*

By definition, a polysynthetic language has obligatory subject and object agreement. Focusing on Mohawk, Baker (1996, p. 87-89) presents a number of arguments showing that NPs in poly-

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<sup>2</sup> Having NP dislocation is not the only feature of non-configurationality (Hale 1983, Baker 1996). In addition to free word order, other properties of non-configurational languages include having discontinuous constituents and radical pro-drop. Here I will focus only on the word order aspect of non-configurational languages and set the other three features aside. I will refer to the language’s ability to order NPs freely as ‘non-configurationality’.

synthetic languages always appear in dislocated positions. First, overt NPs can be freely dropped in Mohawk (9a). If present, they are rather freely ordered (9b,c):

- (9) a. Wa'- ke - tshvri  
 Fact- 1sS- find-PUNC  
 I found it  
 b. Wa'- ke- tshvri'- kikv kahure  
 Fact- 1sS-find-PUNC this gun  
 I found this gun  
 c. Kikv kahure wa'- ke- tshvri  
 this gun Fact 1sS- find-PUNC  
 I found this gun (Baker 1996)

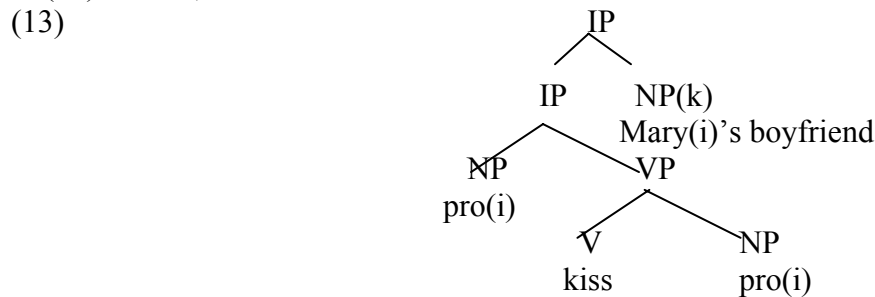
Second, there is no case morphology on any overt NPs. The form of the NP does not vary depending on its grammatical function as seen from the following examples:

- (10) a. Wa'- e - hninu-‘ athre’ (Baker 1996:102)  
 Fact-FsS-buy-Punc basket  
 She bought a basket  
 b. Athere’ wa-e-hninu  
 Basket fact-FsS-buy-Punc  
 She bought a basket

In addition, Mohawk seems to admit constructions that violate Condition C (11), unlike configurational languages such as English that disallow co-reference between the pronoun and the NP as shown in (12):

- (11) Wa'- te - huwa-noru'kwanyu-‘ ne Uwari ako-skare (Baker 1996, p. 45)  
 Fact-Dup-FsS/MsS-kiss-punct NE Mary FsP-friend  
 She kissed Mary's boyfriend (co-reference OK)  
 (12) \*He(i) took John's(i) hat

Baker (1996) argues that the NP ‘Mary’s boyfriend’ in (11) is actually outside of the c-command domain of the subject and is adjoined to the IP (Baker 1996, p.47). This is illustrated in (13). Hence, Condition C violation is avoided.



Furthermore, Mohawk lacks anaphors such as “himself” or “each other” (Baker 1996):

- (14) # Sak ro- nuhwe'-s ra-uha  
 Sak MsS/MsO-like-Hab MsO-self  
 # Sak likes himself [ok as ‘Sak(i) likes him(j) (Baker 1996, p. 49)

In order to indicate reflexivity or reciprocity a special verb form must be used (15):

- (15) Sak ra-[a]-tate-nuhwe'-s

Sak MsS-REFL-like-Hab  
 Sak likes himself

Baker (1996) argues that the absence of NP anaphors is explained if all NPs in argument positions are *pros* that are co-indexed with overt NPs that appear in adjunct positions. Suppose Mohawk did have NP anaphors. They would appear in adjoined positions, co-indexed with the object *pro*. Since an anaphor must be bound by the subject, (which is also a *pro*), it would mean that the subject *pro* and the object *pro* are co-indexed. This violates Condition B. Hence the hypothesis that overt NPs are adjoined and co-indexed with *pros* explains the absence of NP anaphors in Mohawk.

Finally, Mohawk lacks quantified expressions such as ‘everyone’ and ‘no one’. Quantified expression cannot be dislocated because pronouns cannot be locally A’- bound by a quantifier (Aoun 1985: Ch.5, Aoun 1986, Jaeggli 1982, Rizzi 1986, p. 395-397, Cinque 1990, and Baker 1996). If we assume that all NPs in Mohawk are obligatorily dislocated, then it follows that non-referential quantifiers must be absent in the language.

To explain why overt NPs in Mohawk not just can, but *must* be adjoined, Baker (1996) provides the following argument. He takes the MVC to be the central property of Mohawk. He then argues that (a) in Mohawk agreement morphemes absorb case and (b) that all case-assigning heads must have agreement morphemes. Baker (1996) adopts a version of the Case Filter (Chomsky 1981) which states that overt NPs in argument positions must have case, but adjuncts need not. From the above it follows that if an overt NP were to appear in Mohawk, it would have to be in an adjunct position because otherwise it would lack case, which would cause the derivation to crash. Thus, the clause structure of Mohawk proposed in Baker (1996) is similar to that observed in clitic left dislocation (CLLD) constructions such as exemplified by Italian (Borer 1981; Cinque 1990, ch.2; Baker 1996, p. 98 -113). Argument positions are occupied by null *pros* that are co-indexed with overt NPs in adjunct positions.

While Baker’s argument explains the facts, it requires the assumption that agreement morphology in Mohawk absorbs case. A similar argument has been made for clitics (Aoun 1979, 1985:11, Jaeggli 1982, Borer 1984, Baker 1996, p. 87). This claim is especially intuitive on the view that takes clitics to be pronominal-like functional heads (Uriagereka 1995). But, agreement affixes and clitics, though often historically related, are not the same. While it is impossible to review the rich literature on clitics here (Kayne 1975, Borer 1981, 1986, Jaeggli 1980, Rivas 1977, Marantz 1989, Schneider-Zioga 1993, Sportiche 1998, 1999, Suner 1988, Torrego 1998, Everett 1996, van Riemsdijk 1999, Woolford 2003, 2004, inter alia), the notable differences between clitics and agreement affixes are as follows. First, clitics are morphologically separable from the verb, while affixes are bound. Second, clitics are subject to clitic clustering constraints. This is exemplified by French and Warlpiri (Kayne 1975, Bonet 1994, Simpson 1991, Woolford 2003, 2006). For example, in both languages a first or a second person accusative clitic cannot co-occur with a second or a first person dative clitic (16, 17) (Woolford 2006: 20; also Simpson 1991:149)

(16) \*Il me te donne (FRENCH; Woolford 2006:20)  
 He 1stSgCL 2sgCL give  
 He is giving you/me to me/ you

(17) \*Wati-ngki ka- ju- ngku punta-rni (WARLPIRI; Woolford 2004:20;  
 Man-erg pres- pres- 1sgCL2ndSGCL take-away-nonpast Simpson 1991:149)  
 The man is taking you/ me away from you /me

In contrast, agreement morphemes are not subject to this restriction (18):

(18) Kuyu            ka-    **rna-**    **npa**    ka-nyi            (WARLPIRI; Woolford 2006)  
Meat                pres-   1SgAgr2SgAgr carry-non-past  
I am carrying meat for you

Third, clitics, but not agreement morphemes can exhibit climbing. Fourth, clitics and agreement morphemes can co-exist in the same language, as evidenced by the Romance languages and Warlpiri (Woolford 2003), and be morphologically distinct. For example, the first person singular agreement morpheme in Warlpiri is ‘rna’ while the first person clitic is ‘ju’ (cf 17, 18) above. Finally, clitics can double several arguments, while the number of agreed-with arguments is usually no more than two (Woolford 2003:p.4; Simpson 1991). Further differences are discussed in Woolford (2003) and Zwicky and Pullum (1983).<sup>3</sup> In sum, put into Minimalist terms, agreement is a realization of uninterpretable phi-features on the v/ T; its position is fixed. Clitics, on the other hand, are bundles of *interpretable* features, like pronouns. They need to attach to a host for morpho-phonological reasons, but unlike agreement morphemes their position is not as rigid.

Importantly, Baker (1996) does not treat Mohawk agreement markers as clitics. The claim that agreement morphemes absorb case, however, does not explain why they fail to do so in non-polysynthetic languages such as Russian, English, or Turkish where obligatory subject agreement does not result in non-configurality. Below I present a proposal that reconciles the non-configurational nature of Mohawk with the fact that obligatory NP dislocation in the presence of agreement does not happen in numerous non-polysynthetic languages. I take it as a starting point that overt NPs in Mohawk *are* in adjunct positions and aim to explain the *cause* of NP dislocation by capitalizing on the fact that NPs in Mohawk lack case morphology.

## 2.2 Proposal

### 2.2.1 Some theoretical departures from Agree (Chomsky 2000, 2001)

‘Agree’ (Chomsky 2000, 2001) formulated in (19) is an operation employed by many current Minimalist theories to legitimize uninterpretable features.

(19) *Agree (X, Y) if X c-commands Y; X and Y have matching features; there is no Z with matching features such that X c-commands Z and Z c-commands Y* (adopted from Carstens 2005:p6)

According to (19), the probe (T / v with phi-features<sup>4</sup>) seeks an active local goal (an NP with a case feature), and enters into Agree with it. As a result, the probe’s phi-features are valued via

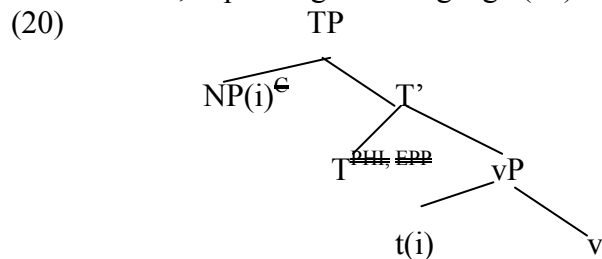
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<sup>3</sup> There are additional more general differences between clitics and affixes (not pertaining to just agreement) given in Zwicky and Pullum (1983). They outline six distinctions. 1. Clitics exhibit a low degree of selection with respect to their hosts, while affixes exhibit a high degree of selection with respect to their stems. 2. Affixed words, but not clitic groups have more arbitrary gaps. 3. Morpho-phonological idiosyncrasies are more characteristic of affixed words than of clitic groups. 4. Semantic idiosyncrasies are more characteristic of affixed words than of clitic groups. 5. Syntactic rules can affect affixed words, but cannot affect clitic groups. 6. Clitics can attach to material already containing clitics, but affixes cannot. I refer the reader to Zwicky and Pullum (1983) as well as to Woolford (2003) for further discussion and references concerning the clitic/affix distinction. There are sufficiently many differences between the two to justify treating them as different beasts.

That said, there are many proposals that *do* treat clitics as agreement (Suner 1988, Everett 1996, Franco 1993, and Sanchez 2003). I will return to this issue in Section 3.1

<sup>4</sup> Chomsky (2000, 2005) refers to probes as just the phi-features on T. I will use the term ‘probe’ to refer to the T/v with phi-features, though I do adopt Chomsky’s idea that it is the phi-features, and crucially, the person feature, that have the capacity to delete. Contra Carstens (2001) whose proposal I will address in subsequent sections, I do not

those of the NP, while the NP's case feature is deleted. The NP is attracted to spec TP to check the EPP on the T. All the uninterpretable features are deleted prior to LF and may or may not surface at PF, depending on a language (20):



The above formulation of Agree involves a tacit assumption that all languages have case and agreement features in line with the Universal Approach. In contrast, I take it as a basic premise of my theory that case and agreement features vary parametrically. Languages may choose to have just the case features, just the agreement features, some combination of them, or none at all. Clearly, if a language does have uninterpretable features,<sup>5</sup> they must be legitimized before the derivation is shipped to LF and PF.

In this paper I make several departures from the formulation of Agree in (19). First, I distinguish deletion of the NP's case feature performed by the probe from 'valuation'/'licensing' (I will use the two terms interchangeably) that happens to the probe's phi-features in return for case feature deletion. Deletion and valuation have the same LF-consequences, namely, the uninterpretable phi-features on the probe and the case feature on the NP are erased. However, the PF-consequences of deletion and valuation are not the same. Deletion makes the deleted element unpronounceable at PF, while valuation causes uninterpretable features to be overtly realized. Under a 'revised' view of Agree (21), the probe deletes the NP's case feature<sup>6</sup>, while the NP values the T's phi-features in return. In (21) there are different consequences for phi-features on T/v and for the NP's case feature:

(21) (Provisional) *Agree* ( $X, Y$ ) if  $X$  has phi-features,  $X$  c-commands  $Y$ ,  $Y$  has matching phi-features; there is no  $Z$  with matching features such that  $X$  c-commands  $Z$  and  $Z$  c-commands  $Y$ .

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take the case feature on T/v to be capable of triggering deletion of case. In addition, I will abstract away from the C as a possible probe. This option may be needed to account for some complementizer agreement effects but is not relevant to our concerns.

<sup>5</sup> A language that has case features on NPs has them on all arguments, though not on adjuncts. Similarly, a language that places phi-features on the finite T does so on all the instances of the finite T, though not necessarily on the infinitival one. In addition, a language that has phi-features on T may not necessarily have phi-features on v, since the T and v are different *types* of heads. A language can have subject agreement without having object agreement. But it is not possible for a language to have case features on some argument NPs without having them on all NPs. NPs merged into a subject or object position are still tokens of the same type – noun phrases. Adjuncts are drawn from a different numeration, as further specified in Section 2.2.2. Thank you to a reviewer for this point.

<sup>6</sup> Following Pesetsky and Torrego (2001), I assume that uninterpretable features do not disappear immediately, but remain until spell-out of the current phase (CP or vP) and are erased prior to being shipped to the interface levels. Hence, the phrase 'the probe deletes the NP's case feature' should be understood as 'the probe marks the NP's case feature for deletion'. I use the term 'deletes' for the sake of brevity. Crucially, I depart from Chomsky (2001) and Pesetsky and Torrego (2001) in that I treat deletion marked features as invisible to further computation.

I will also use the term 'feature checking' in a theory-neutral way to mean 'make X's uninterpretable features legitimate at the interface levels'. Thus, when I say: "the T checks NP's case feature" it simply means X makes the case feature legitimate at PF and LF.

- (i) If Agree( $X^{\text{phi}}$ ,  $Y^{\text{C}}$ ) then Value( $Y^{\text{C}}$ , phi-features on  $X^{\text{phi}}$ )
- (ii) If Agree ( $X^{\text{phi}}$ ,  $Y^{\text{C}}$ ) then Delete( $X^{\text{phi}}$ , case on  $Y^{\text{C}}$ )

In (i) and (ii)  $X^{\text{phi}}$  is a probe and  $Y^{\text{C}}$  is an NP with a case feature. According to (21), the case feature receives no spell-out, while the phi-features on T are realized by overt agreement. There is a principled connection between syntactic operations that legitimize uninterpretable features – deletion and valuation -- and their phonological reflexes. Clearly, languages often have zero-morphemes on some members of the paradigm, even when we expect overt morphology to appear. Conversely, overt morphology may sometimes show up on nominative NPs, contrary to what is predicted by (21). I address this issue in Section 4.

Furthermore, under Chomsky’s (2000, 2001) formulation of Agree it is not possible for the probe to value its phi-features unless it finds an active goal – an NP with an undeleted case feature. Now, if we assume that case features may be absent in a language, what happens when the probe in a language without case features needs to get its phi-features valued? Furthermore, if we maintain Chomsky’s (2000, 2001) idea that the probe can get its phi-features valued by those of the XP *only if* it performs a deletion operation, we are led to the following question: what can the probe delete when there is no case feature on the goal?

A view whose consequences I would like to explore is that in the absence of a case feature, the probe will delete *the interpretable* features of the NP (i.e. the NP’s lexico-semantic and phonological content) in return for agreement. The NP that is marked for deletion will become unpronounceable at PF and deleted at LF, just as if it were a case feature. Consider (21’):

(21’) (Revised) *Agree* ( $X$ ,  $Y$ ) if  $X$  has phi-features,  $X$  c-commands  $Y$ ,  $Y$  has matching phi-features; there is no  $Z$  with matching features such that  $X$  c-commands  $Z$  and  $Z$  c-commands  $Y$ .

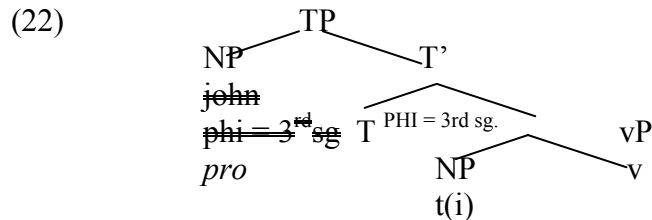
- (i) If Agree( $X^{\text{phi}}$ ,  $Y^{\text{C}}$ ) then Value( $Y^{\text{C}}$ , phi-features on  $X^{\text{phi}}$ )
- (ii) If Agree ( $X^{\text{phi}}$ ,  $Y^{\text{C}}$ ) then Delete( $X^{\text{phi}}$ , case on  $Y^{\text{C}}$ )
- (iii) If Agree ( $X^{\text{phi}}$ ,  $Y$ ), then Delete( $X^{\text{phi}}$ ,  $Y$ )

The addition of (iii) in (21’) offers an interesting way to account for certain non-configurational properties of languages that have rich agreement, no morphological case marking, and a significant freedom of word order. Thus, adopting Chomsky’s (2000,2001) idea that the need to delete is a defining property of probehood, while leaving out the “activity” condition, in line with Chomsky (2005), the probe can be viewed as an *indiscriminate* deleter. Below I examine the consequences that indiscriminate deletion has for LF and PF.

### 2.2.2 On indiscriminate deletion

Let us take the feature structure of the NP to involve phi-features (person, number, and gender) and some semantic features that would allow us to distinguish ‘cat’ from ‘dog’. Phi-features constitute the skeletal structure of the NP that may be further specified by the actual lexico-semantic content; otherwise, they will be spelled-out as a pronoun. If the NP has a case feature, it will be the probe’s only choice for deletion. In the absence of a case feature, however, the probe will delete the entire NP, i.e. its phi-features and its lexico-semantic content.<sup>7 8</sup> This is illustrated in (22):

<sup>7</sup> While I do not specifically assume a late insertion model as in Distributed Morphology (Halle and Marantz 1993), the proposal is compatible with it. Late insertion assumes that there is a minimal featural specification in the node that can be further specified by lexical insertion at PF. On the view taken here, the minimal specification of the N-



In (22) the probe deletion-marks the NP. At spell-out, when the deletion is actually carried out, the NP is replaced with a featureless empty category. I will refer to it as ‘*pro*’, thus capturing the fact that languages with obligatory agreement and caseless NPs such as Mohawk allow free pro-drop. The phi-features of the deleted NP will be reflected in agreement morphology. The *pro* can be specified by an adjunct, as long as the phi-features of the adjunct and those recorded by agreement do not conflict. Importantly, the adjunct is added later, post-cyclically (Lebaux 1988, 1990; Chomsky 1993) and does not figure in the initial syntactic computation. If present, adjuncts are drawn from a distinct lexical array. To be specific, in the syntax, the argument ‘john’ in (22) is selected from some lexical array N(i) and merged either early in the derivation or at the point of spell-out (a la Distributed Morphology). Since ‘john’ lacks a case feature, once the probe agrees with ‘john’, the NP is marked for deletion. At spell-out, the NP is replaced with a featureless *pro*, just before the derivation is shipped to LF/PF. At this time, it is also possible to select an adjoined phrase from another lexical array N(j) and merge it into the derivation. Though the adjunct is added post-cyclically, its phi-features cannot conflict with those recorded by agreement. Assuming that the valued agreement features and the adjoined phrases form a chain at the time of spell-out (via co-indexation), they must have matching features, a requirement for licit chain formation<sup>9</sup> (Cinque 1990, Baker 1996). The Appendix provides a step by step procedure for indiscriminate deletion.

According to the logic of the theory, at LF, NPs marked for deletion would have to be deleted just as if they were case features. Let’s see why it is so. Suppose the LF could interpret the NP, even if it is marked for deletion, though it could not interpret a case feature under the same

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node will be deleted by the probe if the node lacks a case feature, making it impossible for the node to be further specified at PF by an element that has encyclopedic and phonological content. There will be no features that can be matched even partially by any vocabulary item (cf the Subset Principle (Halle 1997)). The element will receive zero spell-out, i.e. it will be realized as an empty category.

<sup>8</sup> I contend that in the absence of a case feature, the NP does not have any uninterpretable features for the probe to delete. The NP lacks an EPP feature. The gender, number, person, and definiteness features are interpretable. It is possible to introduce some other uninterpretable features on the NP, but this would only make the theory more cumbersome. Carstens (2005) proposes that gender features on the N in languages such as Bantu are uninterpretable. However, while this idea has intuitive appeal, especially when it comes to gender on inanimate nouns, it raises the following concern. Masculine and feminine gender features in Indo-European languages, though meaningless on inanimate nouns, are interpretable on the animate ones. Hence, if we were to treat gender features as uninterpretable, we would have to introduce some way by which the probe could distinguish whether a given NP is animate or not. This is particularly problematic for Late Insertion approaches to syntax (Halle and Marantz 1993) which cannot make those kinds of distinctions in the ‘narrow’ syntax. While Carstens makes her proposal for Bantu languages, gender-class markers in Bantu are also semantically relevant for animate NPs. Therefore, I will not adopt the view that gender features are uninterpretable on NPs. I do acknowledge that this is a possible line of argument, though.

<sup>9</sup> An alternative way to rule out a mismatch between agreement features and the features of the adjuncts is as follows. Since the PF component has access to the features recorded by agreement and to those of the adjoined phrase, it can detect a problem if there is a mismatch. A derivation where phi-features on the verb do not match those of the adjoined phrases will crash at PF.

circumstances. In that case, we would have to stipulate that the LF can decide which elements to interpret and which to ignore, regardless of whether they were marked for deletion or not. Now, if the LF could make such a decision, what would prevent it from ignoring the uninterpretable features whenever they are unvalued/undeleted? Doing so, in turn, would deprive the entire operation of Agree of much of its content.

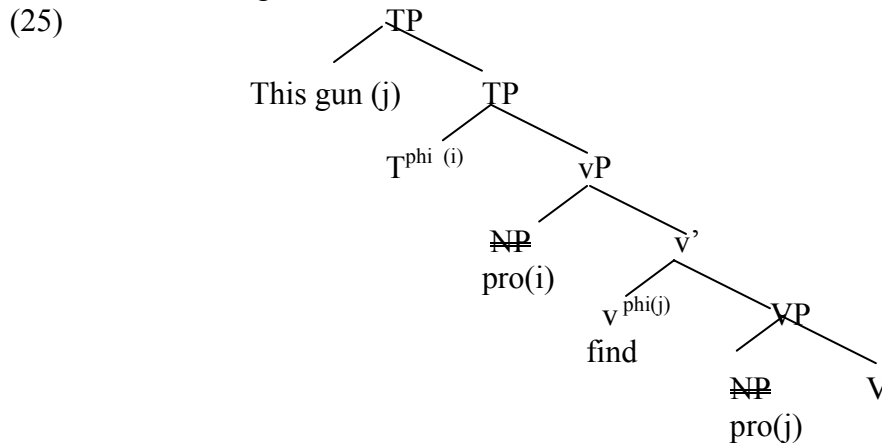
Importantly, since indiscriminate deletion does leave a ‘residue’, namely, the *pro*, selectional restrictions of the verb and the Theta Criterion are not in danger. The LF will interpret the *pro* in the same way it interprets *pro*-dropped subjects and objects in languages such as Spanish or Japanese. If the *pros* are not specified by adjoined NPs, it is quite possible that the resulting structure will be ambiguous and will require disambiguating contextual information. For example, while in many cases agreement acts as a disambiguator in Mohawk (cf 1) in some cases context is required to resolve the ambiguity (23):

- (23) Sak wa- ho- [a]hseht- e  
 Sak factMsS/MsO-kill-punc  
 He killed Sak or Sak killed him (Baker 1996: 130)

To summarize, NPs deleted in return for agreement are unpronounceable at PF and invisible to interpretation at LF. The residue of deletion, *pros*, ensure that the verb’s theta-roles do not disappear at LF. However, in some cases ambiguity may arise.

With this in mind, consider Mohawk. Following Baker (1996), let us take the MVC to be the central feature of Mohawk. We can explain obligatory NP dislocation in the language by taking the absence of case morphology to indicate that the language lacks case-features. The probes (T and v) will then delete both argument NPs in return for agreement, leaving only the featureless *pros* behind. (25) is the structure for (24):

- (24) Kikv kahure wa'- ke- tshAri  
 this gun Fact 1sS- find-PUNC  
 I found this gun



Adjuncts can be overt because they are not agreed with and their featural content remains intact. They can also be rather freely ordered – adjunction to the left and to the right is possible in the language (Baker 1996, p.122). In sum, the proposal attributes the cause of NP dislocation in Mo-

hawk to deletion in return for agreement, which, in turn, arises due to the absence of case features in the language.<sup>10</sup>

### 3. Bantu languages: on caselessness and optional agreement

#### 3.1 Caselessness and the Agreement Parameter

Bantu languages have obligatory agreement with the subject, optional agreement with the object,<sup>11</sup> and no overt case-marking. Unlike Mohawk, Bantu languages do not always agree with thematic subjects. Instead, agreement is with any XP that appears in spec TP (Baker 2003a, Kinyialolo 1991). However, as in Mohawk, agreed-with XPs appear to be dislocated in Bantu. This is argued extensively in Baker (2003a) for Kinande. I turn to his arguments below.

##### 3.1.1 Subject agreement and NP dislocation

In his extensive examination of Kinande, Baker (2003a) (also see Schneider-Zioga 1996, 2000<sup>12</sup>) presents three types of evidence in favor of treating agreed-with XPs as dislocated. The first comes from the presence vs. absence of the augment vowels on nouns. Kinande has special augment vowels that are associated with class markers of the NP (Progovac 1993, Hyman and Katamba 1993). When the augment vowel is omitted, the resulting noun gets a non-specific, narrow-scope indefinite interpretation, similar to a polarity item. Usually, it is not possible to drop the augment vowel unless there is a special context such as negation that licenses the bare form (for discussion of other licensing contexts see Progovac 1993):

KINANDE (Progovac 1993: 264)

- (26) a. Yohani anzire \*(o)-mukali  
       John likes woman  
       John likes some woman  
       b. Yohani si anzire mukali  
       John not likes woman  
       John does not like any woman

Crucially, dislocated NPs must always be definite or specific (Rizzi 1986; Cinque 1990; Baker 2003a). Consequently, if the subject is dislocated, it must appear with the augment vowel. Interestingly, dropping the augment vowel is not possible when the NP is agreed with (27):

- (27) \* Mu-kali mo-a-teta-gul-a eritunda  
       CL1-woman AFF-1.-S/T-Neg/Past-buy-FV fruit  
       No woman brought a fruit (Baker 2003a)

In contrast, thematic subjects that appear post-verbally and are not agreed-with (as in the subject-object reversal or locative inversion constructions) can appear without the augment vowel:

<sup>10</sup> Polysynthetic languages such as Chukchee and Ngandi have ergative case, yet show the kind of dislocation as Mohawk (Baker 1996, Heath 1978). Baker (1996) proposes that ergative case in these languages is semantic. I will return to this question in Section 4.3.

<sup>11</sup> In some Bantu languages (Swahili) object agreement is required when the object is animate.

<sup>12</sup> Schneider-Zioga (2000) also treats subjects in Kinande as appearing in the left periphery. However, she proposes that they are base-generated in the Topic position, higher than the landing site of the wh-phrase, and linked to an argument position via predication a la CLLD-ed objects in the Romance languages (Cinque 1990; Iatridou 1991, Schneider-Zioga 1993, 1994). Though different in detail, this approach is similar in spirit to Baker's proposal and the one advanced here.

- (28) a. Olukwi                      si-      lu-li-seny-a                      ba-kali  
 Wood.11      Neg-      11S-Pres-chop-Fv      Cl2-women  
 Women[focused] do not chop wood
- b. Omo-mulongo                      mw-      a-      hik-      a      mu-kali  
 Loc.18-village                      18S.-T-                      arrive-Fv      Cl1-woman  
 At the village arrived a woman

In addition, preverbal agreed-with thematic subjects must have obligatory wide scope in Kinande, as illustrated by the following example (Baker 2003a, p. 120):

- (29) Omukali      a-gul-a                      obuli      ritunda  
 Woman 1      1.S/T-buy-FV      every      fruit  
 A single woman bought every fruit

The above sentence must be interpreted as involving a specific woman who bought every fruit. Finally, Baker (2003a) shows that *wh*-in situ is impossible with agreed-with subjects. Clefting the interrogative subject is obligatory.<sup>13</sup>

- (30) a.\* (Iyo)ndi      a-gul-a                      eritunda  
 Who                      1S/T-buy-Fv      fruit  
 Who bought a fruit?
- b.      Iyondi yo      u-a-gul-a                      eritunda  
 Who Foc.1      1Swh-T-buy-Fv                      fruit  
 Who is it that bought fruit?

In-situ *wh*- is possible with subjects that are not agreed-with as in (31):

- (31) Omo-mulongo                      mw-a-hik-a                      ndi?  
 Loc-18.village                      18S-T-arrive-Fv                      who  
 Who arrived at the village?

### 3.1.2 Object agreement and NP dislocation

Object agreement patterns with subject agreement in Kinande with respect to the above dislocation diagnostics. Agreed-with objects cannot remain inside the VP as shown in (32):

KINANDE

- (32) a. N-a-      gul-a                      eritunda

<sup>13</sup> A reviewer points out that the obligatory wide scope for agreed-with subjects as well as the requirement that agreed-with subjects must be moved only occurs if there is no focusing of any other elements in the clause. "If the object has undergone displacement related to *wh*-question formation, then the subject can be interpreted as a polarity item or it can be agreed-with in-situ *wh*-subject" (anonymous reviewer). While agreed-with subjects don't normally appear in-situ (Schneider-Zioga 2000), in (i) the subject *wh*-element is in situ despite being agreed-with.

(i) EkIhI(k)      kyO      [IP      ndI      a-kalangIra      t(k)]  
 what      that-agr                      who      sees

\* What does who see? (S-Z 2000: 15)

This fact is at odds with the evidence in favor of dislocation of agreed-with XPs. However, (i) has an interpretation of an echo question (M.Baker field notes, pc), which are oftentimes impervious to syntactic requirements. For example, echo-questions in Russian escape superiority violations as shown in (ii)

(ii) Chto kto kupil? (ok as an echo-question only)  
 what who bought?

Similarly, the requirement that agreed-with XPs be dislocated in Kinande appears to be 'waived' in echo-question contexts. Though I cannot provide an explanation for why it should be waived, the phenomenon is not entirely unprecedented as other constraints seem to be 'relaxed' in echo-questions.

- 1sg.S.-T-buy-Fv      fruit  
 I bought fruit
- b. Eritunda      n-a-ri-gul-a      (\*eritunda)  
 fruit-5      1sgS-T-OM5-buy-FV      fruit  
 The fruit, I bought it.      (Baker 2003a)

Conversely, when there is no object agreement, the object must follow the verb, i.e. cannot be dislocated (33).

- (33) \* Eritunda      n-a- gul- a  
 fruit-5      1sgS-buy-FV  
 The fruit, I bought.

Similar facts are observed in Chichewa (Bresnan and Mchombo 1987). When object agreement<sup>14</sup> is present, the object can appear at the beginning or at the end of the clause as in (34a,b). Without agreement, it must be VP-internal as seen from the contrast between (34c) and (34d):<sup>15</sup> CHICHEWA (Bresnan and Mchombo 1987)

- (34) a. Zi-      na-      wa-      lum-      a      alenje njuchi  
          SM      past      OM      bite-      INDIC      hunters bees  
          Bees bit the hunters
- b. Alenje      zi- na- wa-      lum-      a      njuchi  
          hunters      SM –past-OM-bite-      INDIC      bees  
          Bees bit the hunters
- c. \* Njuchi      alenje zi-      na-      lum-      a  
          Bees      hunters      SM      past      bite-      INDIC  
          Bees bit the hunters
- d. Njuchi           zi-      na-      lum-      a      alenje  
          Bees           SM      past      bite-      INDIC      hunters  
          Bees bit the hunters

The fact that non-agreed-with NPs cannot be dislocated in Chichewa is significant in that it indicates that the language does not have free word order in the absence of agreement.<sup>16</sup>

To account for the above facts in Kinande (and other Bantu languages) Baker (2003a) proposes an Agreement Parameter which states that “a verb Y agrees with an overt XP iff XP is dislocated” (Baker 2003a). According to Baker (2003a), obligatory dislocation of agreed-with XPs in Bantu languages has to do with the nature of phi-features and the EPP feature. (Carstens 2005 makes a similar proposal). In particular, he proposes that agreement is not a distinct feature

<sup>14</sup> Though Bresnan and Mchombo (1987) treat object agreement as pronoun incorporation, I depart from their analysis in accordance with Baker (2003a) and Woolford (2000) and treat it as affixal agreement morphology, not clitics.

<sup>15</sup> The object may precede the verb if it is focused in the OSV construction. Focus-related movement is different from dislocation and may take place in the absence of agreement. Cases of focus-related movement of the object are orthogonal to the current discussion and I will set them aside.  
 the absence of case features on NPs. Thank you to a reviewer for bringing this point to my attention.

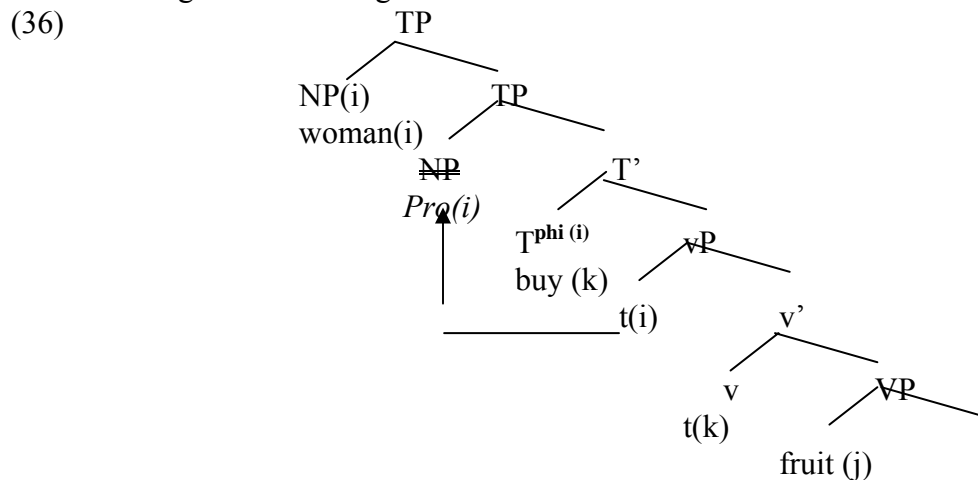
<sup>16</sup> As pointed out by a reviewer, while many Bantu languages have a free word order in the presence of agreement, it is not true for Kinande where the subject that agrees with the verb must appear pre-verbally (Schneider-Zioga 2000). Baker (2003a) also notes that subjects *and* objects must appear to the left of the verb when agreed-with. This property of Kinande can be reconciled with the otherwise non-configurational nature of the language by assuming that Kinande allows NP-adjunction only to the left, unlike Mohawk or Chichewa that have no such restriction. This argument is made in Baker (2003a).

on T, but is a feature packaged either with the EPP feature or with the nominative case feature. While in Indo-European languages agreement features on T are packaged with the nominative case feature, in Bantu languages they are parasitic on the EPP feature. Baker further proposes that “if agreement is packaged with one feature, it checks the head’s other feature.” (Baker 2003a: p.124). In other words, if phi-features are packaged with the EPP feature, then checking agreement with an XP implies checking the T’s case feature. Importantly, Baker also assumes that it is the case feature on T that checks the NP’s case feature (cf Carstens 2001). As a result, if an overt NP is attracted into spec TP, it will cause the derivation to crash because there is no matching case feature for it. Only the *pro* that does not need case can be attracted to spec TP, while overt NPs occur in dislocated positions (Baker 2003a:125, Baker 1996).

While I adopt Baker’s arguments in favor of treating overt NPs as dislocated when agreement is present as well as his proposal concerning the bundling of phi-features with the EPP feature<sup>17</sup> in Bantu, I differ from him with respect to what causes NP dislocation. Specifically, I propose to derive the requirement that NPs be in adjoined positions from the fact that a) probes must delete something in return for agreement and b) that Bantu languages (much like Mohawk) lack case features. NP-dislocation in the presence of agreement is, thus, epiphenomenal. In the syntax, agreed-with XPs are not dislocated, but *deleted* and then doubled by adjuncts. Interestingly, the range of languages that obey Baker’s Agreement Parameter are those that have agreement features but lack case features, a property which is orthogonal to the Polysynthesis Parameter, in line with the argument Baker (2003a) makes. (36) is the structure for (35):

KINANDE (Baker 2003a)

- (35) Omukali a-gul-a ritunda  
 Woman 1 1.S/T-buy-FV fruit  
 A single woman bought fruit



The proposal, thus, explains the non-configurational properties of Kinande and Chichewa by extending the account for Mohawk to Bantu languages. A prediction that cuts across languages that obey the Polysynthesis Parameter and the Agreement Parameter is made: in languages that

<sup>17</sup> I do not adopt Baker’s claim that checking one feature of the head requires checking its other feature. This claim is logically independent from the proposal that phi-features are bundled with the EPP feature in Bantu: it is possible that checking the EPP feature and phi-features with a given XP leaves the T’s case feature intact.

lack case features but have agreement features argument positions will be filled with *pros*, while overt NPs will appear in adjunct positions.<sup>18</sup>

It is worth pointing out here that NP dislocation in Bantu (and Mohawk), though similar to clitic-doubled and CLLD constructions in the Romance languages or in Greek, is different from these phenomena in an important way. The difference hinges on the assumption that agreement morphology and clitics are not the same (contra Suner 1988, Everett 1996, Franco 1993, and Sanchez 2003) and that the latter, but not the former can ‘absorb’ case (Borer 1981). Let’s take clitic doubling first. On those proposals where the clitic occupies an argumental position (Kayne 1975, Uriagereka 1995, Panangeli 1998, inter alia) it is assigned case. The doubling NP (if present) is dislocated (Jaeggli 1986), or sits in the spec of the clitic that heads the DP (Uriagereka 1995, cf Papangeli 1998; see also Torrego 1998, Zubizarreta 1998 for a similar positions). Other proposals treat clitics as base-generated, co-indexed with a *pro* that sits in the argument position (Chomsky 1982, Jaeggli 1986, Sportiche 1992/1998, Kayne 1994, Aoun 1999 for Lebanese Arabic, Iatridou 1991 and Schneider-Zioga 1993 for Greek). The doubling element is adjoined and receives its theta-role via predication, as argued explicitly in Aoun (1999). Importantly, regardless of whether the clitic, or the *pro* co-indexed with it, occupy the argument position, the clitic takes away the verb’s case either because it is the actual argument or because once it attaches to verb, it ‘absorbs’ case, arguably due to its pronominal properties. Agreement, on the other hand, cannot do so. Otherwise, we could not explain why agreed-with subjects are not dislocated in the same languages that have NP dislocation in clitic doubling constructions (cf discussion in Section 2.1). Agreed-with (post-verbal) subjects, for example, show no evidence of dislocation in the Romance languages or in Greek (Alexiadou and Anagnostopoulou 1998, Sanchez 2003). Turning to CLLD, according to Cinque (1990), these constructions involve a base generated NP in an adjoined position, linked to a *pro* that occupies an argumental position. Again, assuming that agreement morphemes in Bantu languages are not clitics (Baker 2003a, Woolford 2000,2001; contra Bresnan and Mchombo 1987), they are not candidates for case-absorption. In sum, though clitic doubling and CLLD are similar to the kind of dislocation observed in Bantu languages and in Mohawk, in that in both cases the overt NP is not an argument of the verb, the reasons for this are different. In clitic doubling constructions (or in CLLD) the verb’s case is taken away by the clitic; in Bantu languages and Mohawk, argument NPs are deleted in return for agreement because they lack

<sup>18</sup> Agreement in constructions with ‘linkers’ discussed in Baker and Collins (2005) that allow the order Verb Object Linker XP do not present a counter-example to the proposal, even though the agreed-with object appears inside the VP. The linker is an element that appears separately from the verb (Baker and Collins 2005). It agrees with the XP and attracts it to its spec. The agreed-with element must be to the left of the linker and to the right of the verb (i, ii).

KINANDE (Baker and Collins 2005: p.  
 (i) M-o-na-hir-ir-e okugulu k’- omo-kihuna  
 Aff-1<sup>st</sup>-T-put-Ext leg-15 LK15 loc-18-hole 7  
 I put the leg in the hole  
 (ii) M-o-na-hir-ir-e omo-kihuna m’- okugulu  
 Aff-1<sup>st</sup>-T-put-Ext 1 loc-18-hole 7 LK18 leg-15  
 I put the leg in the hole

Importantly, the object in these constructions does not agree with the verb, but rather with the linker. As expected, the object appears to the left of the linker. This is reminiscent of the requirement that dislocation of agreed-with subjects be to the left in Kinande (Schneider-Zioga 2000, Baker 2003a). Furthermore, the element the linker agrees with can be *pro*-dropped (Baker, pc), but if present, must have the augment vowel, facts indicative of dislocation (Baker, pc). It is also worth noting that in Kinande the linker does not appear in simple transitive constructions (Baker and Collins 2005: 48), which suggests that linker agreement may be distinct from the kind of object agreement I am dealing with in this paper. Thank you to a reviewer for bringing this point to my attention.

case. If subject and object agreement in Bantu languages are treated as clitics, on the other hand, the Bantu dislocation facts and the clitic doubling / CLLD facts become very hard to distinguish, and may be argued to exemplify the same phenomenon. This is a possible alternative to the current proposal, though additional arguments in favor of caselessness in Bantu languages are presented in the next section (Thank you to a reviewer for bringing up this issue).

### 3.2 Locative Inversion and OVS in Bantu: an argument for caselessness

#### 3.2.1 Locative inversion

In this section I turn to locative inversion (Bresnan and Kanerva 1989; Ura 2000, references therein) and inverse voice constructions (Ndiyaragije 1996; Ura, 2000) and show that the existence of these constructions in Bantu languages provides independent support for the claim that Bantu languages lack case features. Locative inversion is illustrated below for Chichewa (Bresnan and Kanerva 1989) and Kinande (Baker 2003a):

CHICHEWA (Bresnan and Kanerva 1989, p.2, Ura 2000, p.156)

(37) a. Ku- mu-dzi ku-li chi-tsime  
17- 3 -village 17-be 7-well

In the village is a well

b. Chi-tsime chi-li ku- mu-dzi  
7-well 7-be 17-3-village

A well is in the village

KINANDE (Baker 2003a) cf. above

(38) Omu-mulongo mw-a-hik-a omukali  
Loc.18- village 18S.-T-arrive-FV woman

At the village arrived a woman.

As we see in the examples above, agreement is with the preposed PP, not with the NP theme. Following Bresnan and Kanerva (1989) and Baker (2003a), the locative phrase checks the phi-features on T.<sup>19</sup> That locative phrases can induce agreement is a special property of Bantu languages that is not shared by the Indo-European ones.<sup>20</sup> In the English analogue of the locative inversion construction the verb agrees with the theme:

<sup>19</sup> Locative phrases in Chichewa carry two class markers: one for the noun class of the NP and one indicating the class of the locative particle. The same is true of Kinande (i):

(i) a. oko-mu-longo b. omo-mu-longo  
loc.17-cl.3-village loc.18-c.3-village  
At the village In the village (examples provided by M. Baker, pc)

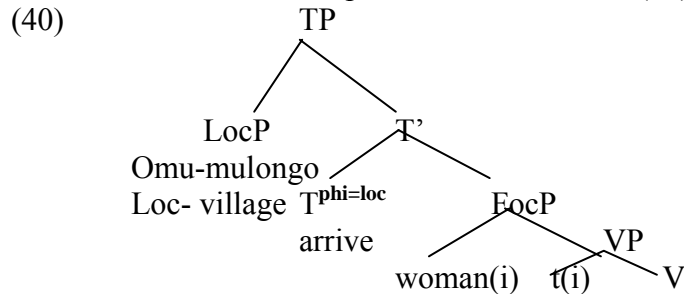
While the locative class marker in (i,b) has gender class '18', 'village' belongs to class 3.

<sup>20</sup> A reviewer points out that locative phrases and preposed objects can induce agreement in Tagalog and other Austronesian languages when the locative phrase acts as the subject of the sentence. Since Tagalog has case, it appears to present a counter-example to the claim that having agreement in locative inversion constructions requires the absence of case. However, without a specific example, it is hard to judge whether the Tagalog facts are analogous to those in Bantu. For example, it is not clear whether agreement in Tagalog is of the same sort as in Bantu languages. It is rather impoverished and only involves number agreement. Aldridge (2006) argues that 'agreement' in Tagalog is better viewed as a marker of transitivity (contra Richards and Rakowsky 2005). I refer the reader to Aldridge (2006) for extensive discussion.

(39) In the yard were/ \* was 5 children

Assuming that phi-features on T are involved in case-checking, the illformedness of (39) is clear: even if the PP could value the T's phi-features, they would get deactivated and hence unable to check the case feature on the lower NP. The acceptability of agreeing locative phrases in Bantu languages is not surprising, however, if these languages lack case features. The locative phrase is free to check the T's phi-features, since the theme does not have a case feature.

Furthermore, following Bresnan and Kanerva (1989), the theme argument in locative inversion constructions receives obligatory presentational focus. This can be explained if the theme moves into a focus position above the VP (40):



Importantly, Foc0, being an A-bar position, also cannot check the case feature on the object NP (if there were one). To address this problem, Bresnan and Kanerva (1989) argue that the theme in locative inversion constructions has inherent case. However, without independent evidence for the existence of inherent case in Bantu, and given the absence of any overt marking on the NP, the proposal is difficult to maintain: inherent case is usually overtly marked. This problem does not arise on the current account.

### 3.2.2 OVS

Inverse voice or OVS constructions (41,42), (also known as ‘subject-object reversal’) pose further problems for a theory that treats case features as universal.

KINANDE (Baker 2003a)

(41) Olukwi si- lu-li-seny-a ba-kali  
 Wood.11 Neg- 11S-Pres-chop-Fv Cl2-women  
 Women[focused] do not chop wood

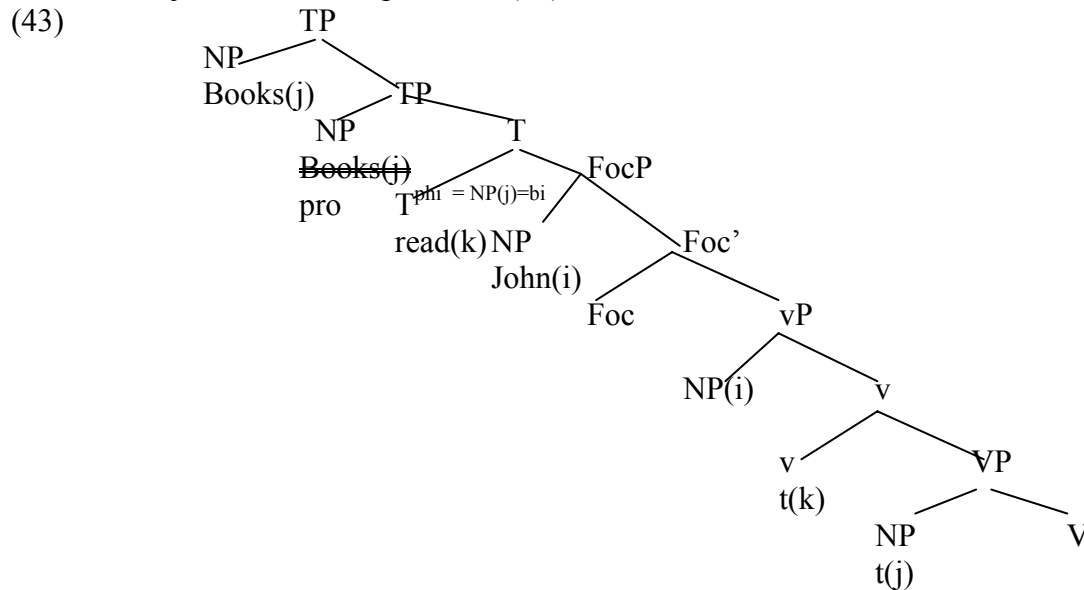
KIRUNDI Inverse Voice: (Ndayiragije 1996: 267, Ura 2000: 41)

(42) Ivyo bitabo bi-a-somoje Yohanni  
 Those books 3PL-Past-read John  
 Those books were read by John

Much like locative inversion, OVS constructions raise the question of how the agent NP gets its case checked. Ndayiragije (1996) presents an account of OVS in Kirundi and argues that the thematic subject moves to spec of FocP, an A' position within the TP above the vP. This is essentially the same as the proposal made in Bresnan and Kanerva (1989) for locative inversion constructions. The movement of the thematic subject to spec FocP in OVS constructions is supported by the fact that the subject is obligatorily focused, while in the SVO construction neither

the subject nor the object receives obligatorily focus.<sup>21</sup> In addition, Ndayiragije shows that the OVS construction is incompatible with a focus marker *-ra* that obligatorily focuses the verb.

Crucially, since the T values its phi-features with the preposed object (42,43), it can no longer agree with the post-verbal thematic subject, which means that the subject's case feature (if there were one) would remain undetected.<sup>22</sup> On the current proposal, however, this is not a problem. The case-less thematic object is moved to spec TP where it is deleted in return for agreement, while the overt NP that doubles the thematic object is adjoined to TP. The (also caseless) thematic subject remains in spec FocP (43):



Since the subject in (43) is in A' position, it does not block the movement of the thematic object into spec TP by Relativized Minimality (Rizzi 1990).<sup>23</sup>

That said, I must point out that the existence of agreement in Bantu locative inversion and OVS constructions can only be viewed as additional evidence of caselessness in these languages if we assume a tight link between case checking and agreement. Alternatives are certainly possible and have been proposed in the literature. Carstens (2001) proposes that what is required for case checking is that the T/v with phi-features also have a matching case feature. She writes: “a probe  $\alpha$  has uninterpretable phi-features. A goal  $\beta$  has matching phi-features. *Uninterpretable phi-features are valued and delete. If  $\alpha$  has an intrinsic structural case value, it values any unvalued case feature on  $\beta$ ; the two case features then delete* [italics mine]” (Carstens 2001: 151).

<sup>21</sup> A reviewer points out that in Kinande SVO constructions the subject must be interpreted as a Topic and hence cannot be focused. Yet, it does receive a special discourse marking. The existence of a Topic position which hosts the overt subject does not contradict the current proposal. In fact, it is compatible with the requirement to only have left dislocation in Kinande.

<sup>22</sup> For Ndayiragije 1996 this is not a problem because he assumes that unchecked case features on NPs are not problematic at LF. This, however, does not explain why similar constructions are impossible in languages that have case.

<sup>23</sup> Note that the v cannot check the subject's case feature since it would lead the subject to have object agreement. If this option were ever allowed, we would see languages where the object gets the nominative case while the subject gets the structural accusative case. I do not consider this option as a viable solution here.

On this view, in the locative inversion construction the T checks its phi-features with the locative phrase, and once it does so, the phi-features are valued and deleted. Only the case feature on T is left to delete the case feature on the theme. (I am assuming that the locative phrase does not have case even on those theories where case features are present in Bantu). However, the idea that the NP's case feature can be deleted by that on the T creates a situation where one uninterpretable feature is checking another. This, in turn, significantly changes the notion of feature-matching (cf Baltin and Barret 2002). In contrast, when case feature deletion is a *consequence* of phi-feature valuation, we have a situation where the interpretable phi-features of the NP value the uninterpretable phi-features on the probe,<sup>24</sup> in line with the overall conceptual view of Agree as a feature-matching operation. Furthermore, in the OVS construction where agreement is with the pre-posed object that by hypothesis *does* have case, Carstens (2001) proposal predicts that once the probe values its phi-features with those of the goal (the object), the probe's case feature and phi-features should delete. This leaves no features to delete case on the post-verbal subject. It is possible that the valued phi-features survive until the end of the phase and are capable of performing another deletion, as argued in Chomsky (2001) and Pesetsky and Torrego (2001). However, Carstens (2001: ft-note 7) shows that there are problems with this approach. The only way to handle the facts in the OVS construction is to assume that the case feature on T can delete that on the subject while the T's phi-features are valued by the pre-posed object. But, this runs into the problem of one uninterpretable feature checking another, and moreover, divorces case from agreement. This is an undesirable result since the two do go hand-in-hand in many languages, a fact which Carstens (2001: 151) admits.

Carstens (2005), building on Baker (2003a), accommodates locative inversion and OVS constructions in Bantu by proposing that in these languages phi-features have the EPP feature, but are not involved in checking case (Carstens 2005:43). Hence, the XP that checks the T's phi-features gets attracted to the spec of TP, while the case feature on the thematic subject can still be checked by the nominative case feature on T which remains available. (Here, Carstens' proposal departs in an important way from Baker(2003a) who proposes that once the T checks its EPP feature with the subject NP, the T's case feature is deleted as well). But, Carstens (2005) proposal also creates a situation where one uninterpretable feature is checking another and divorces case from agreement (at least in some situations) by allowing the NP's case to be checked by the T's case feature. The view that Bantu NPs are caseless, on the other hand, does not face this problem and accords with the empirical fact that case morphology is absent on Bantu NPs. It also provides a link between the kind of NP dislocation observed in polysynthetic languages and that seen in the non-polysynthetic Bantu languages.

#### **4. On having case and agreement features: some consequences of distinguishing deletion and valuation**

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<sup>24</sup> The redundancy of the uninterpretable nominative case feature on T becomes particularly prominent if we assume Pesetsky and Torrego's (2001) proposal that treats nominative case feature as a misplaced interpretable T-feature on the NP. The authors propose a view called 'Relativized Extreme Functionalism' which states that all features are interpretable, but may become uninterpretable if placed on the wrong head. Thus, nominative case feature is an interpretable Tense (T) feature that becomes uninterpretable when it is placed on D. This view clearly eliminates the need for an uninterpretable case feature on T and has a number of desirable consequences explored in detail by the authors. Now, if the nominative case feature is fully interpretable, it certainly cannot be used as a probe, capable of performing deletion, unless the notion of probehood is completely rethought. While I do not explicitly adopt their proposal, it fits very well into the theory I am developing here.

In this section I turn to languages that have both case and agreement features. The focus of the section will be on the non-co-occurrence of overt case on subjects and objects with overt subject and object agreement in nominative-accusative languages. In Section 4.3 I turn to ergative languages and show why they may allow overt ergative case on agreed-with subjects. Since this section is dedicated to languages that have case features, it is expected under the current proposal that they should not exhibit the kind of non-configurationality phenomena as shown by the languages that lack case features but have agreement. This expectation is borne out by the facts in nominative-accusative languages: none of the Indo-European (I-E) languages have the kind of obligatory dislocation of agreed-with NPs as observed in Mohawk or Bantu, though many I-E languages have vast scrambling possibilities. Therefore, I will not dwell much on the issues concerning dislocation in languages with case and agreement features. I will return to the question of non-configurationality, however, in Section 4.3 when discussing ergative languages, specifically Chukchee, a language classified as polysynthetic in Baker (1996).

#### 4.1. On nominative case and agreement

##### 4.1.1 Unmarked case on subjects and objects

Much typological research indicates that the unmarked nominative case of the kind we see in numerous I-E languages as well as in Finnish, Hungarian, Kannada, Malayalam, Turkish, and Mongolian (among others) consistently occurs together with subject agreement (Nichols 1986, 1992; Blake 1994; Falk 1997). The following examples illustrate this:

RUSSIAN

(44) Mal'chik            chitajet            knig-u  
       Boy-3rdSgMsc    read-3rdSg        book-acc  
       The boy is reading the book

TURKISH

(45) Hasan    oekuez-u        aldI  
       Hasan-nom ox-acc        bought  
       Hasan bought the ox        (Falk 1997, p.17)

MALAYALAM

(46) Puucca    eliy-e            tiNnu  
       Cat-nom    rat-acc         ate  
       The cat ate the rat        (Mohanan 1982, quoted from Falk 1997, p.17)

The above data is used as star evidence by many proposals that treat nominative case as 'default' and hence unmarked (Marantz 1991, Harley 1995, Bobaljik 2005, McFadden 2004) as well as by those that treat it as the absence of case (Bittner and Hale 1996). Working from a different angle, the proposal advanced here makes a strong prediction that agreed-with NPs cannot have overt case morphology, since case features (if present) will be deleted in return for agreement. (47) is a structure for (44):

(47) [TP [T<sup>phi=3rdSgMsc</sup> [vP NP<sup>ϕ</sup> [v [VP...]]]]

Furthermore, if we were to find a language that has agreement with the subject and the object, we would expect both NPs to be unmarked. However, the agreed-with NPs will not be necessarily dislocated. This situation is attested in Southeast Pueblo Nahuatl (MacSwan 1998). South-

east Puebla Nahuatl (MacSwan 1998) allows scrambling, but non-SVO orders usually involve contrastive focus and/or topicalization in the language. There is no sign of the kind of non-configurationality observed in Mohawk or Kindande. Moreover, in some cases non-SVO orders are not accepted by speakers. The following data from MacSwan (1998) illustrates this fact:

- (48) a. Ne ni-k- tlasoitla in Maria  
 I 1S-3O-love IN Maria  
 I love Maria  
 b. Ni-k- tlasoitla ne in Maria  
 1S-3O-love I IN Maria  
 I love Maria  
 c.\* In Maria ni-k- tlasoitla ne  
 IN Maria 1S-3O-love I  
 Intended: I love Maria

Even more significant is the fact that S. P. Nahuatl unlike Mohawk has a non-referential quantifier “kada” = “each” (49) that exhibits weak-crossover effects (50a,b):

- (49) Kada tlakatl o-ki-pipitzo in i-siwa  
 Each man Past-3S-3S-kiss IN 3Pos-wife  
 Each man kissed his wife  
 (50) a.\* N-i-kni ki- tlasojtla kada ichpochtle  
 IN-3Pos-brother 3S3O-love each girl  
 Intended: Her brother(i) loves each girl(i)  
 b. Kada ichpochtle ki- tlasojtla n-i-kni  
 Each girl 3S3O-love IN-3Pos-brother  
 Each girl(i) loves her brother(i)

If NPs in S.P. Nahuatl are in argument positions, then both the presence of non-referential quantifiers and weak-crossover effects are expected.<sup>25</sup> Since the language has phi-features on both the T and the v, as evidenced by the overt subject and object agreement, there is no overt case on NPs. Case features are deleted in return for agreement in this language as shown in (51b)

- (51)a. I love Maria [Nahuatl]  
 b. [TP [T<sup>phi=1stSg</sup> [vP NP(I)<sup>ϕ</sup> [v<sup>phi=3rdSg</sup> [VP [NP(Maria)<sup>ϕ</sup> [v...]]]]]]]]

Nahuatl, thus, presents a minimal contrast to Mohawk. It indicates that the absence of case morphology across the board, in the presence of agreement, does not yet mean that the language is syntactically caseless. But, if NPs lack overt case and are dislocated when agreed-with, we can attribute obligatory NP dislocation to the fact that the language lacks case features.

#### 4.1.2 ‘Marked’ nominative case and subject agreement: some counterexamples

Some languages seem to go against the prediction that agreed-with NPs must lack overt case. Notably, these include Latin and Greek.

<sup>25</sup> MacSwan 1998 does not provide an example of weak-cross-over construction with a proper name to contrast it with the quantifier with respect to weak-cross-over effects. He also does not mention whether S.P. Nahuatl have anaphors.

LATIN (constructed based on Wheelock and LaFleur 2007)

(52) a. Serv-us Corniliam portat  
slave-sgMsc Cornilia-acc carry-3rdSgPrs

The slave is carrying Cornilia

b. Serv-i Corniliam portent  
Slave-PIMsc Cornila-acc carry-3rdPIPrs

Slaves are carrying Cornilia

GREEK (Alexiadou and Anagnostopoulou 1998)

(53) a. o Petro-s efigh-e  
the Peter-nom left-3rdSg

Peter left

b. diavese ena pedi / Petro-s to vivlio  
read-3rdSg a child/ Peter the-acc book

A child / Peter read the book

The overt endings on subjects in (52) and (53) challenge the claim that deleted case features are not realized at PF. However, given that these endings vary depending on the gender of the noun, I propose to treat them as gender morphemes, not case.<sup>26</sup> For example, some of the allomorphs of the masculine singular morpheme in the nominative case in Latin are ‘-us’ as in *serv-us*, ‘-a’ as in *agricola* = ‘farmer’ (rare)<sup>27</sup>, and the zero allomorph as in *puer* = ‘boy’. The feminine nouns are mostly marked with ‘-a’ (1<sup>st</sup> declension) and ‘-s/-es’ (3<sup>rd</sup> and 5<sup>th</sup> declensions) (Allen and Greenough 2001). In Latin, the neuter gender is the best behaved one – there are exceedingly few neuter nouns ending in ‘-us’ or ‘-a’, e.g. *opus* = ‘work’, *genus* = ‘gender’, *lemma* = ‘theme’ (*from Greek*), and *theoremata* (*from Greek*). This is explained if these endings mark gender, as opposed to marking only case. The claim is extendable to Greek, where despite some syncretism, most nouns ending in ‘-s’ are masculine, those ending in ‘-a/-i’ are feminine, and those ending in ‘-o/ -i, -ma’ neuter<sup>28</sup> (Eisenberg 2003).

Turning to implementation, though case features are distinct from the interpretable gender features in the syntax, in the morphological component, they may be realized as a single morpheme. Hence, the spell-out of the gender features may be different depending on the value of the case feature (e.g. ‘-is’ for dative masculine plural and ‘-um’ for accusative masculine sin-

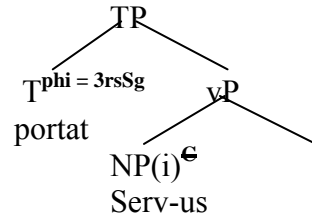
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<sup>26</sup> Another possibility is to treat the Latin ‘-us’ and ‘-um’ and the Greek ‘-s’ as morphological defaults that must appear on nouns in some declensions because ‘bare’ roots in these declensions lack morphological spell-out. That is, the actual root such as ‘serv’ does not exist as an independent form and requires an affix such as ‘us’. Other nouns, on the other hand, can appear bare (e.g. *puer* = boy). I leave this idea as a possible alternative.

<sup>27</sup> In addition to the masculine nouns ending in ‘-a’, Latin has nouns ending in ‘-us’ in the nominative case in both masculine and feminine genders. These include *manus* = ‘hand’Fem; *lacus* = ‘lake’Masc, *alvus* = ‘belly’Fem, and *humus* = ‘ground’, among others. However, there are relatively few of these, so their existence can be attributed to syncretism in gender marking, maintaining the view the ‘-us’ and ‘-a’ mark feminine and masculine genders.

<sup>28</sup> Pronouns in English receive a similar treatment: ‘he’ is the base form lacking morphology, while ‘him’ or ‘his’ is derived via affixing ‘-m’ and ‘-s’ respectively. Latvian and Lithuanian also appear to have overt nominative case, but the proposal made for Latin is extendable to them. Latvian has the endings ‘is/s’ for the masculine nominative singular and ‘e/a’ for the feminine nominative singular, cognate to those in Latin (Lelis 1984). Lithuanian has the endings ‘-as, -is, -ys, -us/uo’ (nominative singular masculine) and ‘-a/ -e/- ti’ (nominative singular feminine) The ending ‘-is’ is used for feminine nouns in the third declension as well (Ambrasas and Gaižauskas 1997).

gular, Latin 2<sup>nd</sup> declension). Similarly, if the NP's case feature is deleted, the resulting NP may be spelled out in its 'bare' form, but it may also have additional number and gender affixes in certain declensions. This is illustrated in (54). To wit, the features number + gender + deleted case are realized as '-us' in the 2<sup>nd</sup> declension for singular masculine nouns (*servus*); it is realized as '-um' for the neuter ones (*bellum*), and as '-a' for the feminine nouns in the first declension.



The above treatment of overt nominative morphology does not devalue the idea that syntactic operations have predictable morphological consequences: while features marked for deletion have to be unpronounceable at PF, there may be intervening factors such as the requirement that gender/number affixes be overtly realized on the NP. Furthermore, some forms are syncretic, whereby the same morphology appears on masculine and feminine nouns (e.g. in the 5<sup>th</sup> and 3<sup>rd</sup> declensions in Latin both feminine and masculine nouns end in '-es' and '-s' respectively. However, most nouns in the 5<sup>th</sup> declension that end in '-es' are feminine, except *dies*='dayMasc' (Allen and Greenough 2001)). As mentioned at the outset, the view advocated in this paper does not negate the possibility of a language having zero morphemes or syncretized forms. Importantly, syncretism would have to be assumed even on an account that treats the above overt endings as case in Latin, since the neuter nouns ending in '-um' are the same in the nominative and accusative cases in the language. The claim that they mark nominative case, but change depending on the noun's gender is therefore not better supported than the claim that they mark gender.

#### 4.2 Accusative case and object agreement

The close relationship between nominative case and subject agreement makes it tempting to conclude that case and agreement are related directly – where we see one, we will also see the other (cf Woolford 1999a, 2005). However, the parallelism breaks down once we look at object agreement and overt accusative case (Woolford 1999a). None of the Indo-European languages that have overt accusative case have agreement between the object and the verb. The generalization also holds in non-Indo-European languages such as Finnish, Mongolian, and Turkish. For example, in Russian, agreement with the object is possible in dative subject constructions when the object is nominative, but not when it is accusative (55a,b). Agreement with accusative objects is impossible when the subject is nominative as well (56):

RUSSIAN

- (55) a. Dim-e                      budut      nuzhn-y      /\*nuzhen      knigi  
           Dima-3rdMsc-dat    will-3rdPL    need-3rdPL    /\*need-3rdSgMsc    booksFem-nomPL  
           Dima will need books
- b. Dim-e                      budet      nuzhn-o                      /\*nuzhna      knig-u  
           Dima3rdMsc-dat will-3rdSg    need-3rdSgNeut    /\*need-3rdSgFem    bookFem-accSg  
           Dima will need a book
- (56) Dima ljubit      /ljubil                      knig-u                      /\*ljubila knigu  
       Dima loves3rdSg / loved3rdMsc    bookFem-accSg / loved3rdSgFem bookFem-accSg

Dima loves the book

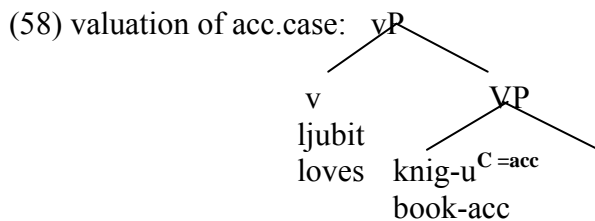
When the object is nominative, the verb and the auxiliary agree with it; however, when the object is accusative, agreement is default (3rdPers.Neut). When the subject is nominative, the verb agrees with the subject only. The same facts hold in Hindi that allows ergative-accusative and ergative-nominative constructions, but object agreement is possible only when the object has the nominative (unmarked) case (Mahajan 1997, Mohannan 1994).

While often ignored, this fact is highly significant. It lends crosslinguistic support to the claim that overt agreement is inversely related to overt case, which follows naturally from the theory advocated here. Overt agreement results in the unmarked case on the NP because phi-features on T/v delete the case feature on the goal (if the goal has one) in return for valuation. In contrast, an agreement theory that takes phi-features to be (a) universal on T and v and (b) the only way to get case features checked on the NP will predict that accusative case should appear together with object agreement. As mentioned in Section 3, it is possible to divorce phi-feature checking from case checking and require case to be deleted by a matching case feature on the T/v (Carstens 2001, 2005). If so, phi-features can be retained on the v universally, but then we lose the link between the unmarked nominative case and subject agreement.

Under a version of Agree where case features get checked only by a phi-complete probe (contra Carstens 2001, 2005), there is a question of what checks case on the object NP if the v lacks phi-features. Capitalizing on the distinction made in Section 2 between deletion and licensing, I propose that a head that lacks phi-features can value the NP's case feature, even though it cannot perform a deletion operation. Valuation, much like deletion, targets the closest (local) NP that the agreement-less head c-commands. Furthermore, in the spirit of the view, whose roots go back to GB (Chomsky 1981), I propose that the T values *overt* nominative case, v accusative, and P oblique. Unlike a case feature marked for deletion by the  $T^{\text{phi}}$  or  $v^{\text{phi}}$ , a case feature valued by an agreementless T, v, (or P) will be realized overtly. Valuation of case is defined in (57):

(57) **Value** ( $X, Y^C$ ) if X is a head, X *lacks* phi-features, X c-commands Y, Y is an NP/DP with a case feature, there is no Z such that X c-commands Z and Z c-commands Y, where Z is a T, v, or P that can value or delete the case feature on the NP.

Under the current proposal, Agree becomes split into valuation and deletion where valuation of phi-features on the probe can take place iff the probe performs a deletion, while valuation of the NP's case feature happens precisely when there is no probe that can delete case. I further take it as a basic axiom of the system (arguably attributable to economy) that no head can both delete and value case features. Case feature valuation by a phi-less v is parallel to the valuation of agreement features on a phi-complete v by the NP in that both result in the appearance of overt morphology at PF and deletion of the uninterpretable features at LF(cf 21'). Crucially, much like the object's interpretable phi-features value the uninterpretable phi-features on v in (51b), for example, the interpretable v-features value the object's case feature in (58). The valued case feature is realized as accusative case:



We thus capture an important parallel between overt case and agreement – they are two sides of the same coin – a result of valuation of uninterpretable features. The close relationship between case and agreement has been noted at least since the late 80’s when Agr projections were proposed to capture the connection between case and agreement (Polluck 1989, Kayne 1989/1998, Schneider-Zioga 1996 for Kinande). The current proposal focuses on the PF-consequences of case and agreement connection, by separating the operation of valuation from deletion.<sup>29</sup> A desirable result of this separation is that we capture the non-correlation between overt case and overt agreement in languages that have both case and agreement features. This is illustrated by the unmarked nominative case in Indo-European languages, as well as by the morphologically unmarked case on agreed-with subjects and objects in Nahuatl.

However, the claim that object agreement and overt accusative case are in complementary distribution is challenged by a language such as Nez Perce (Rude 1986, Woolford 1997, 1999a, Carnie 2003, Cash and Carnie 2002) that appears to have overt object marking in the presence of overt object agreement.

NEZ PERCE

(59) *Haama hi- wi- ye wewukiye* (NEZ PERCE; Woolford 1997, Carnie 2003)

Man-abs 3-shoot-asp elk

A man shot an elk

(60) *Haama-nm pee-wi- ye wewukiya-ne*

man- erg 3/3-shot-asp elk-NE

the man shot **the elk**

Interestingly, object marking in Nez Perce exists only on definite / specific objects (Rude 1986; Woolford 1997; Carnie 2003; Cash and Carnie 2003).<sup>30</sup> The morpheme ‘ne’ in Nez Perce is similar to a post-cliticized definite determiner of the kind seen in Swedish or Bulgarian. Definiteness/ specificity on objects, marked via special morphology may be confounded with accusative case because it appears on objects in a position where we would expect case to appear.<sup>31</sup> However, given that ‘-ne’ appears on definite objects only, something else may be at work. The facts in (59) and (60) can be accounted for if ‘-ne’ is a realization of the object’s definiteness feature. In (60) the phi-complete v deletes the object’s case, but leaves its definiteness feature intact. That object agreement, spelled-out as a portmanteau morpheme ‘pee’, takes place only with definite objects can be accounted for if the phi-features on v in this language are bundled together with a definiteness feature and hence can only match DPs that are [+definite]. This view is in line with the proposal in Cash and Carnie (2003), Carnie (2003) who treat (59) as an intransitive construction involving a pseudo-incorporated bare NP object (Massam 2001) that is

<sup>29</sup> I assume that phi-features cannot be deleted because there is nothing to delete them – there is no probe for a probe. While this is a stipulation, it is not new to the present proposal, and is an inherent part of the formulation of Agree (Chomsky 2000, 2001), as well as Chomsky (1995). The current proposal simply preserves this asymmetry.

<sup>30</sup> Carnie (2003), Cash and Carnie (2003), unlike Woolford (1997) treat the marker ‘nm’ as nominative case.

<sup>31</sup> A related phenomenon happens in some languages that allow accusative case markers on indefinites to be dropped or zero-realized, while requiring definite/specific objects to retain accusative case. These include Turkish, Mongolian (Mallinson and Blake 1981; Blake 1994; Falk 1997), and Gujarati (Mistry 1987). However, this is different than what we observe in Nez Perce since these languages lack object agreement. The presence of overt case on objects in these languages does not present a counterexample to the proposal. Accusative case on indefinite objects may be realized as a zero morpheme in these languages.

obligatorily indefinite, while (60) is a transitive construction with a definite DP object. Hence, agreement in (59), unlike that in (60), is marked with the intransitive morpheme ‘-hi.’<sup>32</sup>

That overt case on the object does not appear together with object agreement is a sub-case of a more robust crosslinguistic generalization which states that the relationship between agreement-marking and case-marking is inverse (cf Nichols 1986, 1992). In fact, as observed in Baker (1996, p.131), while numerous Australian languages have robust morphological case systems, the Northern Australian languages that have developed polysynthetic systems (i.e. have obligatory subject and object agreement) either have non-obligatory case-marking (e.g. Ngalakan and Rembarrnga) or no case-marking at all (Nunggubuyu and Mayali). As Baker puts it “[there is an] inverse relationship between the amount of morphological case and the ‘degree of Polysynthesis’” (Baker 1996, p.131). These facts receive a straightforward explanation by the present account, but are missed by theories that consider phi-features to be universally present on v and view the spell-out of case and phi-features as arbitrarily varying from language to language.

### 4.3 Ergativity and subject agreement

#### 4.3.1 On the nature of ergative case

If valuation results in the appearance of overt morphology on the NP while deletion results in overt agreement on the verb and unmarked case, how can we explain agreement with ergative subjects in languages such as Basque, Inuit or Warlpiri among many others (Bittner and Hale 1996a,b, Legate 2005)? Unlike object agreement with accusative objects, there are numerous languages where ergative subjects agree regardless of their definiteness or gender.

WEST GREENLANDIC (data from Manning 1996: 3)

(61) Oli-p                    neqi                    neri-vaa  
       Oli-ERG meat-ABS        eat-ind-tr-3<sup>rd</sup>-SG-3<sup>rd</sup>-SG  
       Oli eats meat

BASQUE

(62) Jon-ek Miren jo du  
       Jon-erg Miren-abs hit aux3rdSgTr  
       Jon hit Miren

WARLPIRI

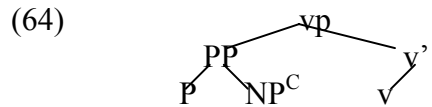
(63) Nyuntulu-rlu ka- npa- ju ngaju nya-nyi  
       You-        erg prs-2sg-1sg me-abs see-npst  
       You see me                    (Woolford 2006)

Building on Alexiadou (2001), Mahajan (1997) and in part on Johns (1992) I argue in XXXX (2006) that a unifying feature of all ergative languages is that they lack a thematic transitive v. The agent/ actor theta-role is assigned by a morphologically dependent (affixal) adposition, to

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<sup>32</sup> Woolford (1999b) also mentions Quechua and Hungarian as possible exceptions to the generalization that overt accusative case does not appear on agreed-with objects. Quechua has both object agreement and overt object case. However, while the language has agreement with 1<sup>st</sup> and 2<sup>nd</sup> person objects that cliticize onto the verb and pro-drop, 3<sup>rd</sup> person objects have case marking but do not show agreement (Cole and Jake 1978; Muysken 1981; Milken 1984). Similarly, in Hungarian object agreement appears when the object is 3<sup>rd</sup> person and definite, while accusative case must always be present on the object. The Hungarian facts receive a similar explanation to the Nez Perce facts: if the phi-features on v are always bundled with a feature [+definite], object agreement will be with definite objects only. Unlike Nez Perce, however, Hungarian does not mark definiteness the object.

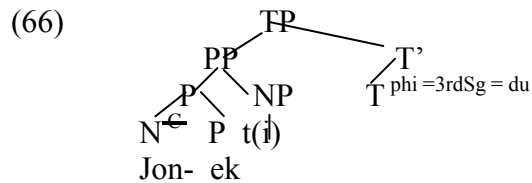
which I refer as the ‘ergative’ P. The ergative subject is not an NP, but a PP, merged into a spec of a non-thematic transitive v (64).



Because the ergative P is morphologically dependant, it must attach to the NP. One way to accomplish this is via N-to-P incorporation (65):



In (65), the N’s case feature and phi-features become visible to T for agreement by virtue of the N-to-P incorporation. Hence, the T can delete the case feature on the incorporated N and get its own phi-features valued, as shown in (66) for Basque (62):



The overt morphology we see on the ergative subject in languages such as Inuit or Basque is an adposition,<sup>33 34</sup> not a case marker, and hence can co-exist with agreement.

#### 4.3.2 Some desirable consequences of treating ergative case as a P

There are several desirable consequences of treating ergative ‘case’ as an agent-licensing adposition. First, while there are languages such as Basque (also Georgian) that have ergative subjects on agentive intransitives, termed ‘active’ in Bittner and Hale (1996a,b), there are no ergative languages that have ergative marking on unaccusatives (Comrie 1989, Marantz 1991). Under the current proposal, ‘active’ ergative languages can be viewed as having an underlyingly transitive

<sup>33</sup> Here I do not address the possibility of treating ergative case as nominative (Bobaljik 1993) or as accusative (Murasugi 1992). The reader is referred to Woolford (1997) for a thorough review of the arguments against this position. Briefly, the very existence of three-way Erg-Acc/ Erg-Nom case systems (Woolford 1997) provide evidence against equating ergative case with either nominative or accusative. Other prominent theories of ergativity include Marantz 1984, Levin 1983, Bok-Bonnema 1991, Dixon 1994, and Bittner and Hale 1996a,b, inter alia

<sup>34</sup> The proposal that ergative case is licensed by an agent-assigning adposition P poses a problem for UTAH (Baker 1988, 1997) which states that ‘identical thematic relations between items are represented by identical structural relations between these items’ (Baker 1997:p.1). The problem is obvious: the agent theta-role is assigned by Ps in some languages, but by v’s in others. However, a similar problem for UTAH is already posed by the existence of the agentive ‘by-phrase’ in the passive construction (Jaeggli 1986, Baker, Johnson, and Roberts 1989). The P ‘by’ in (i) ‘The book was read by John’ theta-marks “John” as evidenced by the crucial difference in meaning between (i) and (ii) *The book was read to John* (though see Collins 2005 for an alternative analysis of the passive ‘by-phrase’). While UTAH is highly attractive from a theoretical standpoint, there are empirical challenges, which indicate that as stated UTAH may be too strong. I leave this issue for future research.

v for all unergative verbs that is incapable of licensing the agent theta-role<sup>35</sup>. These languages will then have to resort to the ergative P in both transitive and unergative intransitive constructions (67b). However, since the ergative P assigns the agent theta-role, we can never have ergative ‘case’ on unaccusatives (67a):

BASQUE

- |   |  |
|---|--|
| <p>(67)a. <b>Jon</b> /(*-ek) etorri <b>da</b><br/> <b>Jon-abs/*erg</b> come-prtc-perf aux<b>3rdSgIntr</b><br/>         Jon came (<i>unaccusative</i>)</p> | <p>b. Jon-<b>ek</b> saltatu <b>du</b><br/> <b>Jon-erg</b> jump aux<b>3rdSgTr</b><br/>         Jon jumped (<i>unergative</i>)</p> |
|---|--|

The proposals in Legate (2005), Aldridge (2005) Anand and Nevins (2002), Massam (2001), and Woolford (1997), who treat ergative case as inherent, licensed by the v together with the agent theta-role, also explain the contrast in (67a,b). However, this approach causes difficulties for syntactically ergative language. In these languages (e.g. Inuit, Dyrirbal) (Aldridge 2005, Bittner and Hale 1996a,b) the object and the intransitive subject pattern together with respect to scope, control, and some A-bar related phenomena (Aldridge 2005). This behavior is often attributed to the fact that the object raises past the ergative subject to spec TP or higher, thus becoming more prominent (Bittner and Hale 1996a,b Aldridge 2005). However, this movement crucially violates Minimality. In contrast, if the ergative subject is a PP, while the vP is non-thematic, it can enter the derivation post-cyclically, after the object has moved to spec TP, thus avoiding a Minimality violation. This option is not available to a theory that treats the v as licensing inherent case because not merging the subject into the spec of a thematic v early on will cause a Theta-Criterion violation. The v with an undischarged theta-role will cause a problem when the phase vP is shipped to LF, as in Multiple Spell-Out approaches (Uriagereka 1999, Chomsky 2000).

Second, the proposal offers a way to parametrize agreement with the ergative subject. In particular, the view that ergative subjects are PPs provides a way to explain why some ergative languages exhibit ergative agreement, i.e. treat the intransitive subject and the object as a natural class (Basque), while others show an accusative pattern of agreement (Warlpiri).

BASQUE (U.Etxeberria pc; Bittner& Hale 1996)

- |   |  |
|---|--|
| <p>(68) Jon-ek Miren jo <b>du</b><br/>         Jon-erg Miren-abs hit <b>aux3rdSgTr</b><br/>         Jon hit Miren</p> | <p>Jon erori <b>da</b><br/>         Jon-abs fallen <b>aux3rdSgIntr</b><br/>         Jon fell</p> |
|---|--|

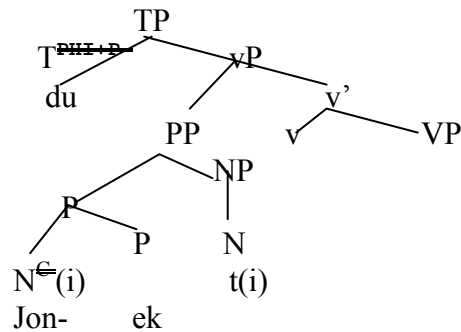
WARLPIRI (Bittner & Hale 1996)

- |  |   |
|--|---|
| <p>(69)a. Nyuntulu-rlu ka- <b>npa</b>- ju ngaju nya-nyi<br/>         You- erg prs-<b>2sg</b>-1sg me-abs see-npst<br/>         You see me</p> | <p>b. Nyuntu ka-<b>npa</b> parnka-mi<br/>         you-abs pres-<b>2sg</b> run-npst<br/>         you run</p> |
|--|---|

<sup>35</sup> One may wonder about the fact that intransitive subjects of unergative verbs such as ‘run’, ‘scream’, ‘smile’, ‘laugh’, etc. have absolutive /nominative case in Inuit and other non-active languages despite having agentive subjects. Assuming that languages often have different sub-types of v, a language can have a non-thematic transitive v, while having a thematic intransitive one. If so, the agent theta-role will be licensed by v in intransitives, but by P in transitives.

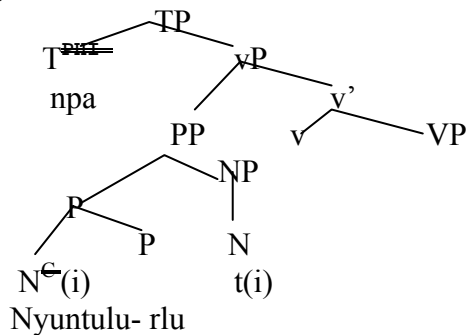
On the current proposal, an *ergative* agreement pattern as in Basque and (also Inuit) arises when the T has a set of uninterpretable phi- and P-features that are matched to the corresponding interpretable features of the PP. This is illustrated in (70) for Basque. Agreement with *all* of the PP's features yields a distinct morphological marking than that triggered by intransitive subjects and objects, which lack P-features since they are NPs. Agreement with prepositional features is not unprecedented. It is quite similar conceptually, though not in detail, to what happens in Bantu languages that have agreement with the locative phrase under locative inversion.

(70) Ergative Agreement



However, if the T does not have P-features along with phi-features, the resulting agreement morphology will be the same as that triggered by intransitive NP subjects. The *accusative* agreement pattern is shown in (71) for Warlpiri:

(71) Accusative Agreement



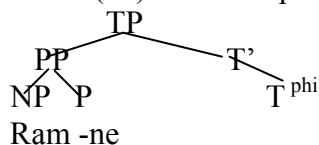
Finally, treating ergative case as an adposition offers a way to explain why ergative subjects fail to agree in such languages as Hindi (Mohannan 1990, 1994; Mahajan 1997) and Tsez (Polinsky 1989), among others:

HINDI (Mahajan 1990:73)

- (72) Raam-ne            roTii            khaayii            thii  
 Ram-erg **bread-fem**    eat-perf-fem    be-past-fem  
 Ram ate bread            **(no agreement w/ erg. subject)**

The absence of agreement can be explained as follows. Incorporation is only one way to satisfy the morphological dependency of the ergative P. Another possibility is PF-Merger (Bobaljik 2002) illustrated in (73). This is a parameter along which ergative languages can vary.

(73)





configurationality that was largely undealt-with in this section. Specifically, I will show that contrary to expectations, we can have a non-configurational ergative language that would have obligatory NP-dislocation.

### 4.3.3 Ergative languages and Polysynthesis

Very few polysynthetic languages have ergative case (Baker 1996, pc), but their existence is a problem for Baker (1996) since overt NPs in these languages are adjoined and should not have case. To address this, he proposes that ergative case in languages such as Chukchee and Ngandi is semantic, a claim facilitated by the fact that ergative case in these languages (as well as in Rembarrnga and Ngalakan) is the same as the instrumental case (Baker 1996 131; Bogoras 1922:702, Heath 1978:42). In fact, Baker (1996) makes a stronger claim that there are no grammatical cases on NPs in polysynthetic languages.

That Chukchee is polysynthetic and shows non-configurational behavior can be seen from the distribution of anaphors in the language. While the anaphor ‘chinit’ can appear in a semantic case or as a possessor, it cannot appear in the direct object position. Instead, a dummy noun root that means ‘body’ must be used with ‘chinit’ (Baker 1996: 52):

- CHUKCHEE (Baker 1996: 52; Nedljakov 1976)
- (77) a. \*Etleg- e chinit wiringe – rke – nin  
 father-erg self defend-pres=3SgSubj/3SgnObj  
 The father defends himself
- b. Etleg- e chinit-kin uwik wiringe – rke – nin  
 father-erg self-poss body defend-pres=3SgSubj/3SgnObj  
 The father defends his body

Baker (1996: 52) introduces a refinement into his theory to account for why NP anaphors are missing from Mohawk, but can appear in Chukchee in some positions. The refinement concerns complex vs. simplex anaphors, and is orthogonal to the current discussion. Crucially, Chukchee like Mohawk does not tolerate ‘bare’ anaphoric elements in argument positions (cf Section 2). The language also shows other types of evidence for Polysynthesis (and the resulting obligatory NP dislocation). These include free pro-drop, obligatory subject and object agreement, absence of infinitives and determiners.

To reconcile the non-configurational behavior of Chukchee with the fact that it has ergative case I propose that the arguments in this language are caseless NPs, much like in Mohawk. The external argument is merged into the spec of a thematic v, again as in Mohawk. The caseless subject is deleted under agreement and then doubled by an adjunct. However, unlike Mohawk, the adjunct doubling the subject is a PP, not an NP. The choice of the category of the adjunct is rather free as seen from the following English example:

- (78) a. As for John, I like him  
 b. John, I like him

- 
- (iv) U Dimy(i) zharko v svojej(i) novoj kvartire  
 To Dima-loc hot in self’s new apartment  
 It’s hot at Dima’s new apartment

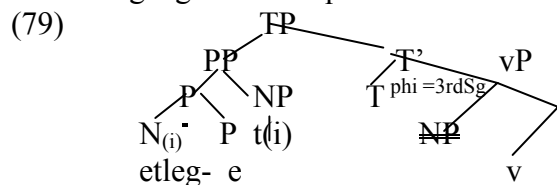
Being a PP does not necessarily deprive a phrase of being able to bind an anaphor even in the absence of N-to-P incorporation. For further examples of binding from non-c-commanding positions see Pesetsky (1996, 2007).

This claim is further supported by the fact that in Rembarranga, another polysynthetic ergative language, ergative case is not obligatory (Baker 1996). That is, the language can select either an NP or a PP to double the deleted argument. Now, assuming that the preposition in the adjoined PP is thematic<sup>39</sup>, we arrive at the conclusion that the NP embedded under the P must either agree with it or incorporate into it to satisfy the MVC repeated (8). In fact, Baker (1996) independently argues that “the argument of the P must either agree with it or incorporate into it, making the P look like a stative verb or a case morpheme” (Baker 1996: 446).

(8) MVC (Baker 1996, p.17)

*A phrase X is visible for theta-assignment from a head Y only if it is co-indexed with a morpheme in the word containing Y via: (i) an agreement relationship; (ii) a movement relationship.*

Thus, since Chukchee chooses to use the PP to double the deleted thematic subject, it would require the N embedded under the P to incorporate into it to satisfy the Morphological Visibility Condition (option (ii)), since the P is an argument-taking head.<sup>40</sup> The result of this looks just as if the thematic subject of the transitive clause in Chukchee had ‘ergative case’, but in fact, it is not so. In (79), the overt ‘ergative subject’ is an adjoined PP, while the argument is an NP that is deleted in return for agreement, as it is in Mohawk. ‘Ergativity’ in Chukchee and other polysynthetic languages is thus quite different than that observed in Basque or Inuit:



Finally, the proposal makes the following testable prediction: languages that have dislocation of both the ergative subject and absolutive object are in fact caseless ergative languages (Chukchee). In contrast, languages that have ergative subjects and absolutive objects, but show no evidence of object dislocation have case features (Basque).

## 5. Languages without agreement features

This section considers the implications of the claim that phi-features much like case features are subject to parametric variation. Focusing on Japanese, I will show that by treating it as lacking agreement in the syntax, not just phonologically, we can explain the distribution of subject anaphors in finite clauses in this language. I will not consider NP dislocation facts in any detail here, since Japanese is a language that has case features and is not expected to have obligatory NP dislocation.<sup>41</sup>

<sup>39</sup> The theta-role licensed by the P in the adjoined PP would have to be something like ‘instrument’ or ‘agent’. This is similar to what happens in the passive construction where the v assigns the agent theta-role to the implicit subject while the ‘by’ assigns one to the adjunct NP (e.g. *The boat was sunk by the owner to collect the insurance*) (cf footnote 34)

<sup>40</sup> In principle the P can satisfy the MVC by option (i) it is simply not the option chosen in Chukchee.

<sup>41</sup> NPs can be rather freely ordered in Japanese. The literature on scrambling in Japanese is quite rich (Saito 1992, Harada 1977, 1992, Fukui 1993, Miyagawa 1997, references therein). Whether we take scrambling to be an instance of a truly optional movement (Hoji 1985, Fukui 1993, Saito 1985, 1992, Tada 1989, 1993) or whether we take it to be motivated by such factors as Focus (Miyagawa 1997), there is no evidence to indicate that NPs normally appear

## 5.1 Nominative case in an agreement-less language

Unlike case features, agreement features, if present, will always be visible at least on some members of the verbal paradigm because there is nothing that could delete the phi-features of the probe (cf ft-note 29). Our first evidence that Japanese is an agreementless language comes from the very fact that there are no overt agreement markers on verbs in Japanese:

JAPANESE

- (80)a. Jon-ga pizza-o tabe-ta  
 Jon-nom pizza-acc eat-past  
 Jon ate pizza/ Jon died \
- b. Watashi-ga pizza-o tabe-ta  
 I-nom pizza-acc eat-past  
 We ate pizza
- c. Watashi-tachi-ga pizza-o tabe-ta  
 I- pl- nom pizza-acc eat-past  
 We ate pizza

Furthermore, Japanese lacks attributive adjectives – a fact that Baker (2003b) attributes to the absence of phi-features in the language. Assuming that attributive adjectives must agree in phi-features with the nouns they modify (Baker 2003b), their absence in Japanese is not surprising. Finally, Miyagawa (2005) argues that Japanese is an agreement-less language where Focus features play the same role that agreement features do in English with respect to triggering movement.

A possible counter-argument to the claim that Japanese lacks agreement comes from the existence of honorific markers on verbs (Harada 1976, Toribio 1990, Hasegawa 2002, Shibatani 1972, Ura 2000). In particular, as argued in Boeckx and Niinuma (2004) and Niinuma (2003), object honorification illustrated in (81) is an instance of agreement, realized as the suffix ‘si/ su’, whose locus is small *v* that c-commands the direct object. Importantly, direct object honorification is blocked in the presence of the intervening indirect object (82 a. vs. b). That is, object honorification is subject to ‘agree with the closest XP’ requirement as expected under Agree

JAPANESE (Bobaljik and Yatsushira 2006)

- (81) Taro-ga Tanakasensei-o o-tasuke-si- ta  
 Taro-nom Tanakaprofessor-acc HP-help-su-pst  
 Taro helped professor Tanaka (OH)

- (82) a. (pro) Yamada sensei-ni otooto-o go-syookai-si-ta  
 I Yamadaprofessor-dat brother-acc HP-introduce-su-pst  
 I introduced professor Yamada to my younger brother
- b. #(pro otooto-o Yamada sensei-ni go-syookai-si-ta  
 I brother-acc Yamada professor-dat HP-introduce-su-pst  
 I introduced professor Yamada to my younger brother

However, in their extensive review of Boeckx and Niinuma (2004), Bobaljik and Yatsushiro (2006) (B&Y 2006) show that their view of object honorification as agreement is not tenable. The

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in dislocated positions in Japanese. In fact as argued in Omo (1999), Ueda (1993) and Tateishi (1994) the subject NP normally appears in spec IP/ TP – the subject position.

authors convincingly argue that the actual honorific marker is the prefix ‘o/ ga’ not the suffix and that ‘o/ ga’ does not c-command the object or the indirect object. Specifically, contra Boeckx and Niinuma (2004), they show that the suffix ‘si’/ ‘su’ is not an instance of object honorification, but rather a light verb. It appears in constructions that do not involve honorification such as in (83) taken from B&Y (2006:361)

(83) Mary-ga            Tanaka sensei-ni    toti-o            zyooto-si-ta  
 Mary –nom        Tanaka professor-dat land-acc        hand-over-do-past  
 Mary handed over land to professor Tanaka

Without the honorific prefix, the above construction with ‘si’ does not have the honorific meaning. Hence, they conclude that “the only morpheme reflecting honorification in Japanese [o/ ga] is contained in the lower VP ... and does not c-command the indirect object”(B&Y 2006, p.359). This is significant since it is the indirect object that is being ‘honorifically’ agreed-with and hence, under ‘Agree’, should be c-commanded by the probe (‘o/ ga’).

Importantly, ‘o’/‘ga’ is not a realization of the v, and hence cannot c-command the indirect object and cannot be the locus of object agreement conventionally conceived. The prefix is present in constructions that do not involve the v at all: it appears on nouns (84a) or adjectives (84b):

(84)a. Yamada sensei-no                            o-boosi  
 Yamada professor-gen                            HP-hat  
 Professor Yamada’s hat                            (Harada 1976, p.539, quoted in Bobaljik and Yatsushiro 2006, p. 363)

b. Sensei- ga            o-zyoubu    da  
 Teacher-nom        HP-tough    be  
 The teacher is tough        (Namai 2000, p.174 quoted in Bobaljik and Yatsushiro 2006, p. 363)

Finally, B&Y (2006) show that object honorification unlike Agree does not show defective intervention effects (contra Boeckx and Niinuma 2004). To summarize, though Bobaljik and Yatsushiro (2006) do not explain what the honorific marker actually is, they make a convincing case that it is not agreement in the usual understanding of this word. I refer the interested reader to their work for further details.

Now, since the T and the v in Japanese are not probes, case-marking on all nouns is overt. Specifically, nominative case in the language is a result of valuation, not deletion, much like accusative case. The parallelism is illustrated below. (I am abstracting away from the issues of headedness here):



Nominative case in Japanese is valued by T and realized as the morpheme ‘ga’, while accusative, valued by v, is realized as ‘o’. The nature of nominative case in Japanese is, thus, significantly different than that in languages with agreement where phi-features delete the case feature on the NP. (For a different approach to subject case in Japanese see Saito 1994, Takezawa 1994, Tateshi 1991). Crucially, overt subject case in Japanese cannot be a realization of the agent-licensing adposition P because it is not tied to any theta-role (86):

(86) a.	Taro-ga	sin-da	b.	Taro-ga	pizza-o	tabe-ta
	Taro nom	die-past		Taro-nom	pizza-acc	eat-past
	Taro died			Taro ate	pizza	

Unlike ergative case, it appears on subjects of unaccusative verbs.

## 5.2 Subject anaphors in Japanese

The absence of agreement features in Japanese is further supported by the fact that the language has anaphors in subject position, unlike many Indo-European languages. The non-appearance of subject anaphors in finite clauses that have agreement marking has been known at least since Government and Binding theory (Chomsky 1981, 1986; Huang 1982, Aoun 1985: Ch1 for Chinese). Some of the major approaches to the absence of nominative anaphors in many languages proposed in the earlier literature are as follows. One accounts for the facts in terms of the Binding-Theoretic rules that govern the distribution of pronouns and anaphors (Chomsky 1981, Everaert 1986). The gist of this approach is as follows. The anaphor has to have an antecedent in its Binding Domain, a domain that must have a subject. Nominative case in many Indo-European languages is the case given to subjects. Hence, if the anaphor appears in a nominative case it *is* a subject<sup>42</sup>:

(87) \*Bill thinks that [himself is smart]

In (87), ‘himself is smart’ is the smallest domain in which the anaphor must be bound, but there is no antecedent to bind the anaphor, which leads to ill-formedness.

Later GB approaches (Chomsky 1986, Lebeaux 1983, Kayne 1984) attempt to derive the impossibility of subject anaphors from the more general principles of grammar, namely the ECP. According to Chomsky (1986), on the LF-movement approach to reflexives, the configuration such as the one in (87) violates the ECP because it involves a trace that is not properly governed:

(88) \*John(i) himself-AGR thinks that [t(i) loves Susan]

Thus, while subject anaphors are possible in principle according to this view, they are ruled out by the ECP. A yet another set of proposals concerning the prohibition on subject anaphors can be grouped under the rubric of the “Anaphor Agreement Effect” approaches (Rizzi 1990, Woolford 1999b, Everaert 2000). The central unifying idea behind these proposals is to attribute the impossibility of constructions such as (87) to the fact that anaphors cannot be agreed-with. This line of argumentation does allow anaphors to appear in the subject position as long as there is no agreement with the anaphor (cf Huang 1982). Rizzi (1990), following a proposal in Picallo (1985), formulates the prohibition as follows: “Anaphors do not occur in syntactic positions construed with agreement”. Woolford (1999b) adopts the major intuition of Rizzi (1990) and augments it by add-

<sup>42</sup> A similar approach is the one that treats agreement as a SUBJECT (Chomsky 1981: 209) for the purposes of defining a Binding Domain. Hence, an anaphor appearing as the subject of a finite clause cannot be bound in its BD. Other proposals in the 80’s and 90’s include Picallo (1985), Pica (1993), Everaert (1986, 1990), Johnson (1984, 1985), and Bok-Bonnema (1991) for Inuit. Kayne (1984) utilizes the ECP approach, but does not assume LF-movement of the anaphor. Another approach within the same era that does not rely on the ECP is the Generalized Binding approach of Aoun (1985, 1986) based on the earlier work in Aoun (1981).

ing another condition. She argues that anaphors are possible only if they are not agreed-with at all or if a language has a *special form reserved for anaphor-agreement* (Woolford 1999b).

The following data from Woolford (1999b) indicates that anaphors are possible in subject position in Japanese.<sup>43</sup> Similar evidence comes from Korean and Thai:

JAPANESE (Woolford 1999b, p. 263)

(89) John-ga kare-ga zibun-ga tensai da to omotte iru to itta (koto)  
 John-NOM he-NOM self-NOMgenius cop COMP think prog COMP said (fact)  
 John said that he thinks that self is a genius

KOREAN (Yang 1983, p.4)

(90) Kitil-in selo-ka kyengcaengha-nin-kes-il calangh-n-ta  
 They-TOP each.other-NOM compete-asp-COMP-ACC boast-asp-dec  
 They(i) boast that each other(i) are competing.

THAI (Woolford 1999b, p. 263; Grima 1978, p.120)

(91) Sommaay(i) khit waa tua?eeng(i) ca day pay  
 Somai think that self FUT get go  
 Somai thinks that he(self) will get to go

To explain the facts, Woolford (1999b) adopts an account in Rizzi (1990), who argues that there cannot be a non-argument in the chain which is higher in the referential autonomy hierarchy than the argument (Rizzi 1990, p. 279; Woolford 1999b). Rizzi (1990) further argues that an agreeing element is an argument while the agreement marker is a non-argument. The referential autonomy hierarchy is defined as: R expressions > pronouns > anaphors. If agreement is treated as a pronoun on the referential hierarchy, and consequently outranks the anaphor, it follows that anaphors cannot be agreed with. However, if agreement is absent, as in Japanese, then Rizzi's principle is not violated. Similarly, if a language has a special agreeing form for the anaphor (e.g. Swahili) (Woolford 1999b) or uses an intransitive verb form (e.g. Inuit), the problem is avoided:

INUIT (Bok-Bonnema 1991, quoted in Everaert 2000: 104)

(92) a. *Hansiup	immi	asap-puq	b. Asap-puq
Hansi-erg	himself-abs	wash-ind3rdSg3rdSg	wash-ind-3rdSg
Hansi washed himself			he washed himself

In contrast, in languages with agreement an anaphor is impossible in subject or object positions where it is agreed-with. Unlike Japanese, the Russian long-distance simplex anaphor 'sebja' is impossible in the subject position (93). Similarly, in Icelandic, object anaphors cannot appear in dative subject constructions where the object agrees with the verb (94):

RUSSIAN

(93) \* Dima dumajet chto sebja umnyj  
 Dima thinks that self smart  
 \* Dima thinks that himself is smart

<sup>43</sup> Katada (1991) shows that not all anaphors in Japanese can appear as subjects of finite clauses. Namely, the long distance simplex anaphor 'zibun' can, but the complex 'zibun-zisin' and 'zibun-kare' cannot. They are subject to the Specified Subject Condition. I refer the reader to Katada (1991) for discussion. It is sufficient for the purposes of the current discussion to show that some anaphors are possible as subjects of finite embedded clauses.

ICELANDIC (Mailing (1984) quoted in Everaert (2000))

(94) \*Mariu(i) leiDist [sjalf sig](i)

Maria-dat bores [herself]

Maria is bored with herself

Everaert (2000) presents a different account of the Anaphor Agreement Effect than the one presented in Woolford (1999b). His proposal crucially utilizes different types of reflexive elements argued for in the Reflexivity framework of Reinhart and Reuland (1993). In this framework there is no simple distinction between pronouns and anaphors; rather they are grouped on the basis of having properties SELF and R. Namely, he proposes following Anagnastopolou and Everaert (1999) that there several classes of anaphoric elements: [+SELF, -R], these are the complex reflexives like Dutch *zichzelf*; [+SELF, +R], these are the inalienable possession reflexives like the Greek *o eaftos tu*; [-SELF, -R] are the simple reflexives such as the Icelandic ‘sig’; and finally, [-SELF, + R] include pronouns and referring expressions such as ‘him’. The marking +SELF means that an element can reflexivize the predicate (Reinhart and Reuland 1993, Everaert 2000:111). The property R indicates whether the element is specified for phi-features. Given these distinctions, Anagnastopolou and Everaert (1999) suggest that the difference between languages that show the Anaphor Agreement Effect and those that do not lies in the generalization according to which –R anaphors can be licensed only in languages that have no specification for verbal phi-features, e.g. Chinese, Japanese, Korean. Since phi-features are uninterpretable on verbs and must be checked against the interpretable features of the noun, the authors argue that –R anaphors will be unable to check the phi-features on the inflected verb, causing the derivation to crash. However, if a verb is not specified for phi-features, as is the case for Japanese, for example, it may tolerate a –R anaphoric expression in the spec of IP. On the other hand, [+SELF, +R] reflexives such as the ones exemplified by Greek would be able to check the uninterpretable features on the verb and thus could appear in positions where agreement is licensed. Hence the Greek-type anaphors are possible in subject positions (95). (See Woolford (1999b) for an alternative explanation).

GREEK (Anagnastopolou and Everaert 1999, Everaert 2000: 107)

(95) [O eaftos tu](i) tu](i) aresi [tu Petru](i)

The-nom self-nom his-gen like-3rdSg the-dat Peter-dat

Peter pleases himself

In sum, no matter whose explanation of the ‘Anaphor Agreement Effect’ we adopt, the facts strongly suggest that the lack of agreement in Japanese is not a mere PF-phenomenon. If it were, we would not expect subject anaphors that are –R in the sense of Reinhart and Reuland (1991, 1993) and Everaert (2000) to be allowed in this language, much like they are not allowed in Russian. There appears to be a syntactically principled reason why some anaphors may be banned from appearing in subject positions. The crucial minimal contrast between English and Japanese is that English has zero spell-out of person morphology in, say, the past tense, but still has the phi-features in the syntax on the finite T, though not on the infinitival one. Hence, anaphors cannot appear in subject positions in finite clauses. A theory that takes agreement features to be universal and hence also present in Japanese, cannot explain the anaphor distribution facts discussed above. Returning for a moment to the argument in Section 4.2 regarding the non-occurrence of accusative case and object agreement, note that the view on which phi-features universally appear on v also cannot explain why Indo-European languages have accusative ana-

phors in the object position but lack subject nominative anaphors. After all, if there is agreement in the syntax with both the subject and the object, anaphors in the subject and object positions should be treated equally by these languages, contrary to fact.

## 6. On being a caseless and agreementless language

### 6.1 Chinese

In this section I turn to Chinese, a language that appears to lack case and agreement features.

CHINESE: (thank you to Li Xiao for providing the data)

- (96) a.wo kan dianying  
       I watch movie  
       I watch a/the movie  
       b.wo xiwang ta xihuan zhe ge liwu  
       I hope he like this CL gift  
       I hope he will like this gift  
       c.wo wang-le ta taoyan mao  
       I forget-asp he dislike cat  
       I forgot he resents cats

That Chinese lacks agreement features is supported by the fact that (a) it lacks overt agreement morphology across the board, much like Japanese; (b) it has subject anaphors in embedded clauses (Huang 1982, Aoun 1986). Huang (1982) argues that subject anaphors (97) are possible there precisely because the Infl in the language does not have AGR:

- (97) Zhangsan(i) shuo [ziji(i) hui lai]  
       Zhangsan say [self will come  
       Zhangsan said that himself will come (Aoun 1986:9)

Turning to syntactic case, if Chinese were an agreementless language with case features like Japanese, we would have seen overt case, but we do not. The inevitable conclusion emerging from the current proposal is that Chinese is a syntactically caseless and agreementless language.

This claim is a strong one and goes against not just the Universal Approach, but also the proposal in Li (1985, 1990) who argues for the existence of abstract case in Chinese. Li (1990) proposes that Chinese is a head-final language except “under the requirements of case assignment.” According to Li (1990), case is assigned from left to right in Chinese and a case assigner assigns at most one case (Li 1990: 11). Li (1990) derives a number of properties of Mandarin Chinese related to word order, passives, unaccusatives, and the ‘Ba’ construction from the above proposal. Below I address some of her arguments in favor of abstract case in Chinese.

One argument is that Chinese does not seem to have overt subjects in infinitival constructions, a feature characteristic of other languages that have case. Thus, Li (1990) argues that Chinese has a finite/ non-finite distinction that is diagnosable from the types of complements a verb takes. For example ‘tell’-type verbs but not ‘persuade’-type verbs take complements that allow aspectual markers (pp. 19-21). She writes: “Infinitives, but not finite verbs, allow syntactic relations such as the licensing of negative polarity items or time adverbials by an aspect marker in a different clause. Furthermore, future tense markers such as ‘hui’ and ‘yao’ can occur in finite but not nonfinite clauses”(Li 1990:22). Li (1990: 22) provides examples that show that overt NPs are disallowed with verbs that are arguably infinitives, while allowed in others:

CHINESE (Li 1990: 22-23)

- (98) a. Wo jiao ta [(\*)ta chi fan]  
I call him [he eat meal]  
I called him \*he to eat meal
- b. Wo quant ta [(\*)ta jie yan]  
I persuade him [he stop smoking]  
I persuaded him to stop smoking
- c. Wo dasuan [(\*)ta bu qu]  
I plan [he not go]  
I planned \*him not to go
- d. Wo gaosu ta [(ta) yiding hui de jiang]  
I tell him [he certainly will get prize]  
I told him he will certainly get the prize

However, while it may be true that verbs ‘tell’ and ‘persuade’ take different complements, it does not yet mean that one is finite and is able to assign case, while the other one is infinitival and cannot do so. In the absence of any distinguishing morphology, the finite / non-finite distinction cannot be diagnosed by complement selection only. The English counterparts of the sentences in (98) are also impossible as shown in (99), but if the ill-formedness were solely due to case, we would expect them to be saved by the insertion of ‘for’. However, this does not happen in (99a, d), which suggest that case is not the only possible source of ungrammaticality there:

- (99)a. I called him (\*for him) (\*he) to eat the meal  
b. I persuaded him (\*for him) to stop smoking  
c. I planned (?for him) not to go  
d. \*John tried for Bill to leave

Though arguably ‘for’ should license case on Bill and make the sentence grammatical, it does not. In English and arguably in Chinese certain verbs are restricted in the types of complements they take, irrespective of case-licensing. Unlicensed case features are only one reason why overt NPs are ruled out in infinitives. They are often considered to be *the* reason primarily because case is thought to be universal and because those languages from which the ungrammatical examples are drawn (e.g. English) do have case. Crucially, since finite verbs in Chinese lack agreement, yet allow overt NPs, the claim that case features must be present on NPs in Chinese *because* overt NPs are disallowed as subjects of infinitives loses its strength in the Minimalist framework where case-checking is tied to agreement. Assuming a version of ‘Agree’ where phi-features delete the NP’s case feature, if NPs had case, we should expect all sentences to be ungrammatical in Chinese. (This is not so for Carstens 2001, 2005 who does not view phi-features as directly involved in case checking). We, thus, cannot definitively attribute the impossibility of overt subjects of infinitival verbs to the lack of phi-features on infinitives since the latter are also absent on finite verbs, while overt subjects are allowed.

Li (1990) presents additional arguments in favor of Chinese having abstract case. These come from the word order facts, i.e. the requirement that the case assigner and the NP be adjacent (Chomsky 1981, Stowell 1981, Koopman 1984, Li 1983, Travis 1984):

- (100) Wo yao ta zuotian lai  
I want him yesterday come  
I wanted him to come yesterday

(101) \*Wo yao zuotian ta lai  
 I want yesterday him come  
 I wanted him to come yesterday

Adjacency is respected in (100) but not in (101), which makes (101) impossible. Further examples concerning the requirement of adjacency on case assignment come from the focus marker (shi) that cannot intervene between the object NP and the verb, though it can appear post-verbally before those elements that do not need to be assigned case (102, 103):

(102) \*Wo kandao shi ta  
 I see be he  
 I saw HIM

(103) Ta pao-de shi hen kuai  
 he run-De be very fast  
 he runs very fast

However, as pointed out in McCawley (1992), the adjacency requirement is hardly an argument for case as it does not hold in languages that do have case features. In English ‘only’ can easily intervene between the case licenser and the object NP:

(104) Homer eats only donuts and drinks only beer

If the ill-formedness of (102) in Chinese were due to case and only case, the same should be true of English. In addition, to explain why expressions such as ‘twice a week’ or ‘three times’ must appear to the right of the verb, Li (1990) proposes to treat them as NPs that require case and must be right-adjacent to the case-assigning verb. Hence, the VP must be copied.

(105)a. \*Ta kan-le shu san-tian (McCawley 1992: 602)  
 he look-perf book three day  
 He read books for 3 days  
 b. Ta kan shu kan-le san tian  
 He look book look-perf three day  
 He read books for three days

However, as McCawley (1992) notes, modifiers of duration such as ‘very long’ are subject to the same exact constraints as ‘three day’ even though they cannot require case since they are not nominal (106a,b). Conversely, there are acceptable constructions in which duration modifiers such as ‘three times’ do not follow the V without inducing ungrammaticality (107):

(106)a. \*Wo kan-le baozhi hen jiu (McCawley 1992:602-603)  
 I read newspaper very long  
 I read a newspaper for a long time  
 b. Wo kan baozhi kan-le hen jiu  
 I read newspaper read-perf very long  
 I read a newspaper for a long time

(107) a. Ta qu-le Meiguo sanc  
 He go-perf America three times

- He went to America three times
- b. Ta yigong da-le Lisi shifenzhong  
 He hit Lisi for a total of ten minutes

Finally, many of Li's arguments lose their strength in Minimalism where case licensing does not require adjacency in the strictest terms (the probe can Agree with the goal ignoring those elements that are irrelevant for agreement).

In sum, by stipulating that Chinese has abstract case and / or agreement we are not gaining much ground. Without any evidence of case or agreement morphology, the claim that case is present in all languages remains just a theory-internal stipulation. While it may be useful in explaining such phenomena as the absence of overt NPs in infinitival constructions, over-extending this claim may eventually lead to a more cumbersome theory than admitting that case, much like the presence or absence of classifiers or clitics, may vary parametrically.<sup>44</sup>

## 6.2 Caselessness and the Case Filter

A number of arguments often invoked to justify the existence of a universal Case Filter should be mentioned before concluding the discussion. One argument is the impossibility of overt subjects in infinitival constructions. I have addressed this argument with respect to Chinese and shall now return to Mohawk and Bantu languages.

As Baker (1996, 2002) extensively argues, polysynthetic languages lack infinitives altogether. This is so because infinitives lack phi-features in these languages, while the need to have subject and object agreement is required by the MVC. Bantu, on the other hand, do have infinitives and disallow overt NP subjects in infinitival constructions as seen in (108) for Swahili. However, the inability of the infinitival verb to check case is not the only explanation for these facts. Rather, Bantu languages disallow overt subjects in infinitival constructions for reasons related to agreement.

SWAHILI (Data from Vitale 1989: 68)

- (108) a. Juma a-li-jaribu ku-fungua mlango  
 Juma he-past-try INF-open door  
 Juma tried to open the door
- b. Juma a-me-choka ku-simama pembe-ni  
 Juma he-past-tired INF-stand corner-loc  
 Juma is tired of standing in the corner

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<sup>44</sup> Notably, word order in Chinese is quite rigid (Huang 1982) as shown by the impossibility of NP dislocation without focus on the dislocated constituent:

- (i) a. \*Nei-fong-xin gei Lisi Zhangsan xie-le  
 that-clitic-letter to Lisi Zhangsan wrote-asp  
 Zhangsan wrote that letter to Lisi
- b. ta LIAN zhe jian shiqing DOU bu hui zuo (Focus)  
 he Foc this CL thing Foc not able do  
 He can't even do this!

OVS orders are impossible in Chinese even with focus marking (Xiao Li, pc). Similar facts with respect to word order rigidity are attested in Haitian Creole (HC) which also lacks case and agreement morphology (V. Deprez, pc).

- (109) \* Juma a-li-jaribu      Hamisi ku-fungua      mlango  
           Juma he-past-try      Hamisi INF-open      door  
           Juma tried to get Himisi to open the door

Adopting the idea in Baker (2003a) that phi-features are bundled with the EPP feature in Bantu languages, we derive the requirement that Bantu languages must agree with the element occupying spec TP. Now, if Bantu, unlike the Indo-European languages lack a default agreement form, then only an NP that lacks a gender-class marker, and consequently has no agreement features, can occupy the spec of an infinitival T. This way, a ‘trivial’ agreement can be established between the two. However, every overt NP belongs to some gender class, and hence cannot be matched by agreement morphology on the infinitive. The only way for infinitives to satisfy the requirement that the T agree with its spec is via a PRO that also lacks phi-features. Agreement is satisfied vacuously: the absence of phi-features on T ‘agrees’ with the phi-feature-less PRO.

The Case Filter has also been invoked to rule out constructions such as ‘\*destruction the city’ discussed in (Chomsky 1970, Kayne 1981, Amritavalli 1980, Rappaport 1980/2005). However, derived nominals do not necessarily present an argument for the Case Filter. In fact, had ‘of’-insertion been a panacea against case-related violations, we would not expect contrasts in (110 a-d), discussed in Rappaport (1980/ 2005). For example, while ‘of’ arguably rescues the structure in (110a), it does not do so in (110b), instead ‘to’ must be used (Rappaport 1980/2005, see also Amritavalli 1980).

- (110) a. The sale \*(of) missiles to Iran  
        b. The general’s command \*(of) / \*(to) the troops to leave (Rappaport 1980/2005:127)  
        c. My belief \*(to) /\*(of) John to attack Bill  
        d. John’s flight \*(of) / \*(from/ to) the city

Conversely, ‘to’ cannot be used in (110c). Rappaport (1980/2005) argues that the above examples are not explained under Kayne’s (1981) analysis that utilizes ‘of’-insertion as a syntactic operation that rescues case violations. Instead, she argues that ‘of’-insertion is theta-related. In (110a – d) the prepositions ‘of’, ‘to’, and ‘from’ assign different theta-roles to their complements. Using the wrong preposition may cause the construction to become ungrammatical for reasons having to do with thematic structure, not case. Rappaport, thus, writes: “if ... *of*-insertion is purely structurally conditioned, there is no way to derive the nominals [such as *Herbie’s promise to Louis to write*] or to prevent the ungrammatical nominals [e.g. *\*Herbie’s promise of Louise to write*]” (Rappaport 1980/2005:128). Hence, if we were to see the analogues of ‘of’-insertion in languages such as Mohawk, Chinese, or Bantu, the current theory would not be undermined.<sup>45</sup>

Finally, passives, unaccusatives, and raising constructions are also commonly cited as arguments for the Case Filter (notably Burzio 1986): the caseless NP in these constructions has to raise to a case-licensing position. However, this requirement has another plausible explanation: the EPP. This feature is independent of case or agreement and may be universal (see McFadden 2004 for discussion). Thus, the requirement that the thematic object of the passive move to the subject position is not necessarily case-driven, but is EPP-related. This is especially true for languages such as Chinese that lack expletives (Li 1990).

<sup>45</sup> I am unaware of constructions analogous to (110) in the languages I argue to be caseless, however.

### 6.3 Why case and agreement features?

I have argued that languages may lack case and agreement features, but we can turn the question around and ask: why have uninterpretable features in the first place? Though I will not offer an in-depth explanation for the question, I would like to suggest that having uninterpretable features is a strategy chosen by some languages to preserve PF-records of thematic relations (see XXXX 2005a for a detailed proposal). The idea that case is a way to preserve theta-relations at PF is not new (Kiparsky 1997, Falk 1997). Falk 1997 argues that while theta-marking “identifies arguments at the semantic level, ... case identifies them at the morphological [PF] level”. I would like to add to this that agreement is another way to preserve thematic relations at PF, and word order is the third. The approach captures the intuition that theta-roles must be preserved at all interface levels, not just at LF. Movement may erase the initial hierarchy that existed in the derivation at the point of theta-assignment. Case and agreement morphemes can be viewed as the PF reflexes of thematic relations that hold within the vP between the verb and at least one of its arguments. However, in the absence of case and agreement features, thematic relations at PF can be preserved via a rigid relative word order of constituents within the vP. In other words, we can recover thematic relations at PF, provided that the relative order of arguments and the verb has not changed since the assignment of theta-roles or, if re-ordered, NPs are marked via case or agreement morphology. Recall, that languages such as Bantu that have optional object agreement and lack case features require the object to remain in the VP when the object is not agreed-with. I am representing the relevant examples below:

CHICHEWA (BANTU) (from Bresnan and Mchombo 1987)

- (111) Alenjje zi- na- \*(wa)- lum- a njuchi  
Hunters SM past OM bite- INDIC bees  
Bees bit the hunters

Similarly, while Japanese allows case markers to be dropped in colloquial speech, it is not possible to do so if the NP is scrambled (Saito 1985, Ueda 1993, Ono 1999).

JAPANESE

- (112) Son-hon-\*(o) John-ga katta (kotto)  
That-book-acc John-nom bought (the fact that)  
John bought that book (Fukui 1993: 402)

In fact, Ueda (1993) formulates the following condition regarding the possibility of case-marker drop: “The morphological realization of an abstract case may be suppressed iff the noun phrase is in a theta-marked position” (Ueda 1993, quoted in Ono 1999). This fact is consistent with the hypothesis that case and agreement morphology is a way to preserve theta relations at PF. It also sheds light on the fact that languages with rich case systems generally tend to have a greater word order freedom than those that have impoverished case systems (Kiparsky 1997). If a language like Japanese scrambles the object over the subject, the object’s thematic role is still recoverable if the object has overt accusative case. In contrast, if the object’s case marker is dropped, then moving the object over the subject makes it impossible to recover at PF what theta-role the NP was assigned.<sup>46</sup> However, a high freedom of word order in languages with case

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<sup>46</sup> One can wonder why pro-drop is allowed in Chinese or Japanese where there are no agreement morphology to help recover thematic relations. One approach is to argue that only the theta-roles of PF-visible NPs should be preserved / overtly realized at PF.

features is never a requirement; it is always optional. Hence, a language with a rich case-system can still have independent constraints on word order variability.

The above discussion is speculative; its goal is to offer some rationale for why a language would have case and / or agreement features.<sup>47</sup>

## 7. Conclusion.

In this paper I proposed that case and agreement features may vary parametrically. I have shown that whether languages have case features, phi-features, some combination of them or neither has important syntactic consequences, in particular when it comes to word order. I have argued that a language that lacks case features but has obligatory agreement will be non-configurational, while that with case features may allow but not require NP dislocation. Importantly, while morphological caselessness alone is not enough to declare a language to be syntactically caseless, it does provide the missing link when coupled with the obligatory dislocation of agreed-with NPs. The explanation for why NPs appear in adjunct positions in Mohawk and Bantu but not in Indo-European languages falls out naturally from the hypothesis that NPs in these languages are caseless in the syntax together with the claim that probes must perform a deletion in return for agreement. The following typology emerges from the proposal: Type A: L has agreement and no case features. If so, L will have obligatory dislocation of agreed-with arguments. Mohawk, Bantu languages, and (surprisingly) Chukchee exemplify this type. Type B: L has agreement and case features. As a result, L has no overt case on agreed-with arguments, but there is no obligatory NP dislocation. S.P. Nahuatl is a Type B language with both subject and object agreement, while Russian, among other Indo-European languages, is a Type B language with subject agreement only (in transitive clauses with nominative subjects). Now, while we cannot glean the presence vs. absence of case features from the morphology alone, we can do so with respect to agreement features. Unlike case features, agreement features, if present, are always going to be overtly manifested, at least on some members of the paradigm. They cannot be deleted. Type C languages, represented by Japanese, lack agreement features but have case features. These languages may allow extensive NP dislocation, but not require it. Finally, Type D languages, exemplified by Chinese, lack both case and agreement morphology, and hence must be both agreement-less and caseless in the syntax. Their ability to have NP dislocation is highly limited. I have suggested that this is so because word order is the only way such a language can preserve thematic relations at PF.

Languages that would have overt agreement and overt case that is not an incorporated or PF-merged adposition are impossible on the proposal presented here (also XXXX 2006). Languages that have agreement, case features, and obligatory dislocation of agreed-with NPs are logically not ruled out by the proposal. However, I contend that the only way to have all overt NPs in adjoined position *across the board* is to have argument NPs deleted, which in turn is only explainable if there is nothing else for the probe to delete. Otherwise, we would have to stipulate some mechanism that would preclude NPs from ever appearing in argument positions. (Thanks to S. Malamud for bringing this point to my attention). Thus, another consequence of the proposal is that there really are no truly non-configurational languages where all NPs are generated in adjoined positions. Even a candidate like Mohawk is configurational to begin with. It winds

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<sup>47</sup> I view case-marking on adjectives as an instance of adjectival concord – a requirement that the adjective match all the features of the noun including its case.

up with all the overt NPs adjoined because arguments are deleted in return for agreement, not because there is some force prohibiting overt NPs from ever appearing in argument positions. Clearly, the claim that case and agreement feature are not universal is a bold one and has a number of other consequences that remain to be addressed. I hope that future research will help elucidate some of them.

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### Appendix: Indiscriminate deletion

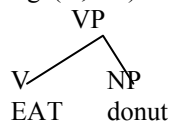
Below I show a step-by-step derivation that involves indiscriminate deletion. For reason of simplicity I will abstract away from late insertion and assume that lexical elements are inserted early on in the derivation. The same result can be achieved via late insertion as well, though if we replace the lexical items with feature bundles.

$N(i) = \{ NP[Homer], V[eat], NP[donut], T^{phi}, v^{phi}, C \}$

$N(j) = \{ Homer, donut \}$

1) Select  $NP[donut], V$ ; Merge( $V, NP$ )

Merge

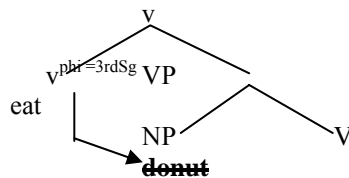


2) Select  $\{v^{phi}\}$ ; Merge ( $v^{phi}, VP$ );

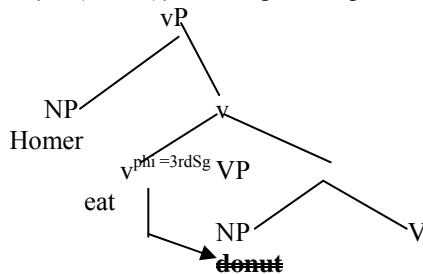
Agree ( $v, NP(donut)$ )

Since the NP lacks a case feature, the probe marks the NP for deletion

The probe's features are value as 3rdSg; the NP (donut) is marked for deletion and replaced with *pro*

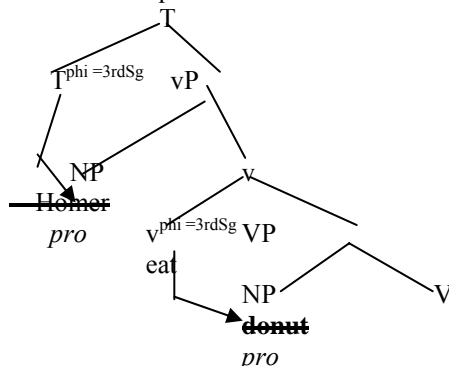


3) Select  $\{NP(homer)\}$ ; Merge into spec vP



4) Select  $\{T\}$ ; Merge ( $T, vP$ )

The T values its phi-features with those of 'Homer' and marks 'Homer' for deletion in return for agreement



5) The marked for deletion NP is attracted to spec TP for EPP checking since it is still visible to syntactic computation prior to the spell-out of the CP

6) Select {C}; Merge )C, TP)

[CP [ C [TP [NP(i)(~~Homer~~) T [vP ... [VP NP(j)(~~donut~~) V]]]]]]

7) Spell-out CP: NPs marked for deletion are replaced by *pros*: [CP [ C [TP [NP(i)*pro* T [vP ...[VP NP(j) *pro*V]]]]]]

8) At this point, NPs 'Homer' and 'donut' can be drawn from the lexical array N(j) and merged as adjuncts: They form a chain with the NPs marked for deletion via co-indexation. Though indices have been banned from some recent Minimalist work (Chomsky 2000), other frameworks argue that they have an important role in the derivation (Baker 2003c). In Kinande, unlike Mohawk, adjunction of the subject would have to be solely to the left.

[CP [ C [TP NP(i)(Homer) NP(j) (donut)[TP [NP(i)*pro* T [vP ...[VP NP(j) *pro*V]]]]]]

9) At PF, the NPs marked for deletion will be phonologically unrealized, while at LF, they will be interpreted as pro-dropped arguments usually are. The adjoined NPs, will be interpreted via chain-formation with the *pros*. Another option is predication (cf Aoun 1999, Schneider-Zioga 1993 for clitic doubling)