

Licensing without Case

by

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Abstract

Abstract Case is a conjectured syntactic property of noun phrases that accounts for aspects of their distribution and form that do not otherwise follow from their PF and LF content (Chomsky 1981, 1986; Chomsky & Lasnik 1995; Lasnik 2008). Traditionally, Case Theory consists of two core components: (i) noun phrase licensing – noun phrases must be licensed through syntactic dependencies, capturing their distribution; and (ii) noun phrase morphology – the licensing of noun phrases influences their morphological realization, capturing their form. In work over the past decade or two, however, the distribution of noun phrases is largely ensured by the properties of clausal heads, independently of Case (e.g. Schütze 1993, 2000; Marantz 1991/2000; Chomsky & Lasnik 1995; Sigurðsson 1991, 2009). These considerations have led to, or been accompanied by, theories that shift the determination of case morphology to PF (e.g. Marantz 1991; McFadden 2004; Bobaljik 2008; Sigurðsson 2009, 2010). If these analyses are correct, there may be no role for C/case in syntax, at all.

In this dissertation, I argue that nominals must indeed be licensed during the course of a well-formed derivation. However, nominal licensing does not require Case-feature valuation, as is commonly assumed (Chomsky 2000, 2001). I demonstrate that Case-features can survive the derivation unvalued (Preminger 2011, 2014; Kornfilt & Preminger 2015). This conclusion invalidates the common view that nominals are licensed through obligatory Case-feature valuation, and phenomena that have commonly received Case-theoretic explanations based on such obligatory valuation are accorded alternative analyses. Nevertheless, I demonstrate that presence/absence of the functional head K^0 in the nominal projection does affect the distribution of nominals in ways reminiscent of, but not identical to, traditional Case theory. I identify three groups of nominals that enter the derivation without K^0 : the objects of Pseudo Noun Incorporation constructions, the objects of Antipassive constructions, and the *in situ* subjects of Balinese and Malagasy. In each case, those nominals which entirely lack KP, the locus of Case-features, display unique distributional constraints, not captured under previous analyses of these phenomena. I suggest that the conditions under which nominals can be licensed without Case (K^0) demonstrate that K^0 is relevant for nominal licensing.

The result of this argumentation is a recasting of the core components of Case Theory. Noun phrase licensing is achieved by the K^0 head itself (cf. Bittner & Hale 1996a,b). Its presence/absence accounts for aspects of a nominal's distribution and form that do not otherwise follow from its PF/LF content. Noun phrase morphology is (indirectly) determined by how Case-features, hosted at K^0 , are valued, if at all.

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Acknowledgments

Be bold.

-David Pesetsky

I've been told that I'm not very good at telling the truth. I think it mainly has to do with the fact that my way of speaking doesn't change whether I'm joking or not. I suspect the same difficulty will be faced reading words on a page, but you'll just have to believe me. Here goes nothing.

I recently remembered a conversation I had during my first semester of graduate school. It was at one of the first colloquium parties of the year, and my cohort and I had finally gotten settled in. Used to the new environment, people, and class schedule and inundated with never-ending problem sets, we talked about what life was like before graduate school and what we missed about our old homes and friends, lamenting that everything was going to be tougher from there on out. Of course it wasn't true. As soon as we realized that most deadlines are soft, there were still many easy days to be had, but what I vividly remember about that conversation is not being worried. A bit over-confident, I was convinced that graduate school, even the daunting task of writing a dissertation, was going to be another best time of my life. To be sure it would be different, but I was convinced that one day I would look back upon my graduate career and say I had fun. Not to toot my own horn too much, but it turns out I was right. Though I wouldn't be able to say that with such confidence if it weren't for the many people that I met, learned from, and worked and laughed with along the way. These are the people that I would like to thank for making this dissertation possible. As they say, teamwork makes the dream work.

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Lastly, I must thank Chanyong for her love, patience, and understanding in all things.

List of abbreviations

A/ABS - Absolutive	F - Feminine	PRF - Perfective
ABL - Ablative	FOC - Focus	PRG - Progressive
ACC - Accusative	FUT - Future	PRS - Present
ACT - Active	GEN - Genitive	PRT - Particle
ADV - Adverbial	H - Honorific	PST - Past
AF - Agent Focus	IN - Intransitive	PTPL - Participle
AOR - Aorist	INC - Incomplete	Q - Question
AP - Antipassive	IND - Indicative	REFL - Reflexive
APPL - Applicative	INST - Instrumental	S - Singular
ART - Article	IV - Instrumental Voice	S - Subject
AUX - Auxiliary	LNK - Linker	SBJ - Subjunctive
ASP - Aspect	LOC - Locative	SPEC - Specific
CL - Clitic	LV - Locative Voice	SV - Subject Voice
CM - Completive	M - Masculine	TOP - Topic
COM - Comitative	N - Neuter	TR - Transitive
COMP - Complementizer	NC - Noun Class	
COND - Conditional	NEG - Negation	
CS - Case	NF - Nonfinite	
CAUS - Causative	NMZ - Nominalizer	
DAT - Dative	NOM - Nominative	
DEF - Definite	O - Object	
DEFV - Default Voice	OBL - Oblique	
DEM - Demonstrative	OBLV - Oblique Voice	
DET - Determiner	OV - Object Voice	
DIR - Directional	P - Preposition	
E/ERG - Ergative	P/PL - Plural	
EMPH - Emphatic	PAS - Passive	
EXPL - Expletive	POL - Polite	

For the fam

The secret of the greatest fruitfulness and the greatest enjoyment of existence is: to live dangerously!

– *Friedrich Nietzsche*

Chapter 1

Introduction: Case and the Case Filter

Case is a conjectured syntactic property of noun phrases that has been employed to capture aspects of their distribution and form that do not follow from their morphophonological or semantic form (Chomsky 1981, 1986; Chomsky & Lasnik 1995; Lasnik 2008). Traditional Case Theory has two core components, noun phrase licensing, also termed abstract Case, (1a) and noun phrase morphology (1b).

(1) *Core components of Case Theory*

a. *Noun Phrase Licensing*

Noun phrases must be licensed through syntactic dependencies – either by selection (inherent Case) or by an A-dependency within the clause (structural Case).

b. *Noun Phrase morphology*

The Case licensing of noun phrases has ramifications for their case morphology.

Case-theoretic accounts of syntactic phenomena suggest that licit nominal positions are in part determined by the requirement that nominals have Case, at least by the end of the derivation. Only by being realized in certain positions or by entering relationships with certain functional heads are nominals licensed. Nominals which are not licensed, i.e. those which do not have Case, are ill-formed. Which position the nominal is realized in and/or which functional head the nominal enters a relationship with determines its form. It is commonly held, following Chomsky (2000, 2001) that both (1a) and (1b) arise due to Case-feature valuation. Unvalued Case-features, [*u*Case], must be valued during the course of the derivation, restricting the distribution of nominals to positions from which [*u*Case] can be valued. How a nominal's [*u*Case] is valued helps to determine that nominal's morphology. The two components are often distinguished orthographically as follows: Upper case *Case* is used when describing the licensing of nominals. Lower case *case* describes nominal morphology. I adopt this convention here.

In work over the past decade or two, however, the explanatory burden borne by principles that make specific reference to Case has lessened. Within current syntactic frameworks, chiefly the AGREE framework (Chomsky 2000, 2001, 2008), the distribution of noun phrases is largely explained by the properties

of clausal heads, independently of Case. For example, ϕ -probes on T^0 , v^0/V^0 , and C^0 find noun phrases to Agree with; their ‘edge’/EPP-features dictate positions for movement; and control infinitives have PRO because of independent properties of their C^0 and T^0 heads, not because of their inability to assign Case or for PRO to bear it (e.g. Sigurðsson 1991, Marantz 1991/2000, Chomsky & Lasnik 1995). The link between licensing and case is further loosened by observations that some noun phrases, including left-dislocated phrases and some conjuncts, have ‘default case’ unrelated to their licensing (Marantz 1991/2000, Schütze 2001), and other noun phrases have idiosyncratically-specified ‘quirky case’ determined by selection. Nevertheless, these noun phrases appear in the same positions as noun phrases with structural Case (Schütze 1993, Marantz 1991/2000, Sigurðsson 2009). These considerations have led to, or been accompanied by, theories that eliminate Case licensing from syntax and, in some cases, shift the determination of case morphology to PF (Zaenen et al. 1985; Yip et al. 1987; Marantz 1991/2000; Harley 1995; Haeberli 2003; McFadden 2004, 2009; Landau 2006; Platzack 2006; Bobaljik 2008; Sigurðsson 2009, 2010). If these analyses are correct, there may be no role for C/case in syntax, at all.

In this dissertation, I argue that abstract Case still has a role to play in the determination of the distribution and form of noun phrases, and that case morphology is determined (at least in part) within the syntactic derivation. However, I will argue that the common analyses that attribute both phenomena to Case-feature valuation is incorrect. I begin to situate my argument in the debate regarding the relevance of Case by reviewing some of the successes and failures of Case-theoretic analyses of syntactic phenomena.

1.1 Cross-linguistic variability and commonality

Morphologically, case is taken to reflect relationships between a syntactic head and its dependent noun phrase(s), or between different nouns in a clause, and languages instantiate case-marking in a number of patterns. However, one of the most influential findings of modern syntactic theory (ignoring for now some empirical problems it faces) has been the observation that languages with little or no case morphology pattern with richly inflected languages in the distribution of nominal complements. Case, whether expressed overtly or not, appears to drive the syntactic derivation. In this way, C/case highlights a common consensus in theoretical linguistics; a small set of shared properties underlies massive cross-linguistic variability.

Consider the cross-linguistic variability in case realization. Descriptions of variation in case-marking among core arguments employ three argument-structural primitives (e.g. Comrie 1978, Dixon 1994):

- (2) *Argument-structure primitives*
 - a. **S** – The subject of intransitive clauses.
 - b. **A** – The subject of transitive clauses.
 - c. **P** – The object of transitive clauses.

Languages can be classified by their *case-alignment* based on which, if any, of the argument-primitives

are grouped together, bearing the same case morphology. ‘Nominative-accusative’ alignments arise when **S** and **A** are marked alike, in contrast to **P**. This pattern is instantiated by Japanese in (3).

(3) *Japanese nominative-accusative alignment*

- a. Taroo-**ga** ki-ta
T.-NOM come-PST
‘Taro came.’
- b. Taroo-**ga** sakana-**o** tabe-ta
T.-NOM fish-ACC eat-PST
‘Taro ate fish.’

Both **S** (3a) and **A** (3b) bear the same case-morphology *-ga*, while the **P** (3b) bears a distinct suffix *-o*. Case alignments in which **S** and **P** are marked alike, in contrast to **A**, are termed ‘ergative-absolutive’. Tongan instantiates this alignment (4).

(4) *Tongan ergative-absolutive alignment* (Otsuka 2000)

- a. Na‘e kata ‘**a** Sione
PST laugh ABS S.
‘Sione laughed.’
- b. Na‘e langa ‘**e** Sione ‘**a** e fale
PST built ERG S. ABS SPEC house
‘John built a house.’

Both **S** (4a) and **P** (4b) bear the same case-morphology ‘*a*’, while **A** (4b) bears the prefix ‘*e*’. In tripartite alignments all three primitive arguments – **S**, **A**, and **P** – bear distinct case morphology. This typologically rare pattern is instantiated in Nez Perce (5).

(5) *Nez Perce tripartite alignment* (Rude 1986)

- a. Hi-páay-na háama
3IN-arrive-ASP man.ABS
‘The man arrived.’
- b. Háama-**nm** péé-‘wi-ye wewúkiye-**ne**
man-ERG 3TR-shoot-ASP elk-ACC
‘The man shot the elk.’

S has no case morphology (5a), and **A** and **P** bear overt case morphemes that differ from one another (5b). Lastly, in ‘neutral’ case systems, overt morphology does not distinguish between **S**, **A**, and **P**: the surface form of the nominal does not change. This is the case for English, outside of the pronominal system, as well as Mandarin, Thai, Vietnamese, and most creole languages.

Neutral languages represent one extreme of possible overt case morphology, displaying no case whatsoever. Highly articulated case system languages, such as Uralic, Dravidian, and Nakh-Dagestanian, occupy

the other extreme. The Nakh-Dagestanian languages represent perhaps the furthest extreme among such systems (Comrie & Polinsky 1998). However, even there, the set of case morphemes available on arguments is small, including cases for subjects, direct objects, indirect objects, and possessors (Blake 2001). Most of the remaining cases are reserved for adjuncts, encoding location and/or direction (Comrie & Polinsky 1998).

Despite cross-linguistic variability in its realization, one of the major advances of modern syntactic theory is the suggestion that Case, often covert, is a cross-linguistic constant (Chomsky 1980, 1981; Vergnaud 2006[1977]). Vergnaud, in a letter to Chomsky and Lasnik, proposed that restrictions on the distribution of nominals in English can be tied to the presence of case morphology in other languages. The distribution of case morphology on Latin nouns matches the distribution of those in English. English permits nominal complements only where Latin nouns display accusative case.

(6) **Verbal complement**

- a. Scripsit libr-**um**
wrote book-ACC
- b. wrote *the book*

(7) **Prepositional complement**

- a. ad Hispani-**am**
to Spain-ACC
- b. to *Spain*

(8) **Nominal complement**

- a. amor libertat-**is/*em**
love liberty-GEN/*ACC
- b. love **(of) liberty*

(9) **Adjectival complement**

- a. urbs nuda praesidi-**o/*um**
city naked defense-ABL/*ACC
- b. a city deprived **(of) defense*.

Pesetsky & Torrego (2011)

In languages with overt case, any nominal that is capable of showing case morphology *must do so*. Vergnaud suggested that the same requirement holds of English, even though the language has no overt case morphology (except on pronouns). Regardless of morphological expression (1b), all nominals must receive Case (1a). If we assume that English has a null variant of accusative case, a verbal (6) or prepositional (7) complement will receive Case. Bare nominal (8) and adjectival (9) complements, on the other hand, will not receive Case.

The requirement that nominals be licensed via Case is often stated explicitly as the *Case Filter* (10).

(10) **Case Filter** (Chomsky 1980)

*[Noun Phrase $-_{Case}$] (if NP has phonological content)

The restriction of the Case Filter to phonologically overt noun phrases, given in parentheses in (10), has formed part of some, but not all, proposals. I will return to this issue in Chapter 7. The import of the Case Filter is in providing a cross-linguistically motivated constraint on the distribution of nominals, replacing previous language- and construction-specific constraints. All nominals need Case (1a).

1.2 Does licensing drive the derivation?

The force of the Case Filter in theoretical syntax lies not only in the original observation of Vergnaud, but also in the variety of consequences that arise once (10) is adopted. The Case Filter is a constraint on syntactic output. By defining how and where in the course of the derivation nominals can receive Case, a principled explanation can be offered for the ungrammaticality of certain classes of constructions. Additionally, as the Case Filter only applies to noun phrases, it has the potential to explain why noun phrases are subject to distributional requirements not enforced on clausal and prepositional elements. In this section, I review some of these applications of the Case Filter. As noted at the outset, subsequent research has found empirical inadequacies with many of Case-theoretic explanations, calling into question altogether the relevance of Case in syntax.

For explanatory simplicity, a rudimentary statement of Case assignment in English is given in (11).

(11) *English Case positions*

- a. Prepositional complements (= lexically-specified morphology).
- b. Verbal complements (= Accusative).
- c. Subjects of *finite* clauses (= Nominative).

I return to an explicit model of Case assignment below. The content of (11) is a necessary part of any description of English grammar. For now, the definitions in (11) will be sufficient to review some domains in which the Case Filter has been invoked, though some shortcomings will be immediately obvious.

1.2.1 A-movement

Satisfaction of the Case Filter is often held to account for the obligatoriness of the movement of noun phrases in passive, unaccusative, and raising constructions. The complement position of a passive (12a,b) or unaccusative (12c) verb is unlike that of a transitive verb (11b); it is a position where (accusative) Case is not assigned (Burzio 1981, 1986). Failure to assign Case to the noun phrase in its base-position triggers movement to a position where the noun phrase can receive Case – namely, the subject position (11c) – satisfying the Case Filter.

- (12) ***A-movement in passives and unaccusatives***
- a. [The window]_i was put *t*_i [under the sink].
 - b. Mary_i was persuaded *t*_i [that the world was ending].
 - c. [The garage door]_i opened *t*_i abruptly.

Failure of accusative Case assignment has no consequence for elements that are not noun phrases. Prepositional (12a) and clausal (12b) complements can remain within the VP.

Similarly, the failure of non-finite T⁰ to assign Case to subjects of such clauses (11c) motivates obligatory raising of an infinitival subject out of the complement of an unaccusative verb like *seem*.

- (13) ***A-movement in raising***
- Mary_i seemed [*t*_i to have written the letter].

The subject position of infinitival clauses is not a Case position (11c); movement of infinitival subjects must occur in raising constructions to satisfy the Case Filter.

That Case requirements apply uniquely to noun phrases captures why nominal and sentential complements behave differently with respect to A-movement. The verb *expect* takes both nominal (14a) and sentential (14b) complements. Both types of complements *can* appear as derived subjects in passives (15).

- (14) ***Nominal and sentential complements of 'expect'***
- a. Everybody expected this announcement.
 - b. Everybody expected that this announcement was going to come.

- (15) ***Nominal and sentential subjects of passivized 'expect'***
- a. [This announcement]_i was expected *t*_i.
 - b. [That this announcement was going to come]_i was expected *t*_i.

Only sentential complements are possible in the impersonal passive, where expletive *it* fills subject position.

- (16) ***Impersonal passives of 'expect'***
- a. *It was generally expected this announcement.
 - b. It was generally expected that this announcement was going to come.

The contrast in (15) and (16) is explained in terms of Case. Sentential complements are not subject to the Case Filter and can therefore appear in Caseless positions. Noun phrases are subject to the Case Filter; in passive constructions, verbal complements do not receive Case in their base-position, so leaving *announcement* in this position violates the Case Filter.

Case Filter satisfaction provides one of the answers to the ever-present question of why movement occurs. However, a Case-theoretic account of A-movement in the configurations above is for the most

part redundant with the *Extended Projection Principle* (EPP) – another proposal for the need for *some* element to occupy the subject position. The EPP explains why verbs, like *expect* (15-17), that take sentential complements display optional movement in their passivized forms. Both examples in (15), as well as (16a), satisfy the EPP, but only (16b) satisfies the Case Filter.

In response to this redundancy, two general approaches have been adopted; (i) reduce the EPP to Case theory (e.g. Borer 1986; Fukui & Speas 1986; Bošković 1997, 2002, 2007; Epstein & Seely 1999, 2006; Martin 1999; Boeckx 2000; Grohmann et al. 2000), (ii) retain the EPP and eliminate Case theory (e.g. Zaenen et al. 1985; Yip et al. 1987; Marantz 1991/2000; McFadden 2004; Sigurðsson 2009, 2010). The question of whether this redundancy can be eliminated, and if so how, has been a topic of considerable debate.

I will return to this debate in more detail below. For now, observe that the facts about which elements move where in A-movement constructions can largely be subsumed under the EPP, rather than Case Theory, so long as something is said to account for the ungrammaticality of examples like (16a). Movement in passive, unaccusative, and raising constructions can then be seen to be driven by the needs of clauses and their functional categories, not by the needs of the noun phrases themselves. In the derivation of A-movement, certain functional heads require that their specifier positions be filled. Despite initial success, the Case Filter may be unnecessary to capture A-movement.

1.2.2 Infinitival subjects

Another apparent achievement of Case theory is its ability to capture the distribution of subjects of non-finite clauses (Chomsky 1980, Bouchard 1984). In general, the subject of an infinitive must not be overt (17a,b), but this restriction does not apply when the infinitival clause is the complement of a particular class of matrix predicates – so-called *Exceptional Case Marking* (ECM) predicates, including *believe* (17c), or when the infinitival clause contains the prepositional complement *for* (17d,e). Where an overt lexical subject is prohibited, the subject of the infinitive is said to be PRO.

(17) *The distribution of infinitival subjects*

- a. John decided [(**Mary/himself*) to cook grits].
- b. **John* to cook grits would be great.
- c. John believed [Mary to have cooked grits].
- d. John decided [for Mary to cook grits].
- e. For John to cook grits would be great.

The distribution of licit overt subjects of infinitival clauses in (17) can be attributed to the Case Filter, given the Case positions in (11). Under (11), subject positions of non-finite clauses are not Case positions. The absence of Case assignment rules applying to non-finite subjects excludes lexical NPs from this position. Overt infinitival subjects are only possible when they are in a Case-position. A slight reworking of (11a)

is already necessary to understand why the prepositional complementizer *for* is able to license infinitival subjects, as in (17d,e), even when they are not complements of it. Furthermore, the availability of an overt infinitival subject in clausal complements to verbs like *believe*, (as well as *want*, *find*, *prove*, *make out*, *expect*, etc.) is more mysterious. The Case Filter helps capture the dichotomy instantiated by the *believe*-class and the *decide*-class predicates, if *believe* and related predicates permit Case assignment across a non-finite clause boundary. Various diagnostics support the view that the subject of the complement of *believe* receives Case as if it were the object of the matrix predicate. For example, accusative case is unavailable in this position when the matrix predicate is passivized (*Mary was believed to have left*). Unlike the subject of other non-finite complements, subjects of complements of *believe*-type predicates appear to be Case-licensed by the matrix predicate, satisfying the Case Filter.

Attributing the distribution of overt nominals to the Case Filter provides a cross-linguistically motivated constraint, even in languages without overt case morphology. This constraint was advantageous in that it replaced lists of syntactic contexts in which NPs are disallowed in a particular language. For instance, the Case Filter replaced the **NP-to-VP* filter of Chomsky & Lasnik's (1977), which had been offered to capture the distribution of overt infinitival subjects. Nevertheless, despite the advancement Case Theory permits in understanding the distribution of overt nominals in (17), the proposed solution is inadequate. Case does not appear to be the driving force in the distribution of infinitival subjects (e.g. Andrews 1971, 1976; Comorovski 1985; Sigurðsson 1991; Carnie & Harley 1997; Babby 1998; Babby & Franks 1998; Franks 1998; Landau 1999 *et seq.*; Harley 2000; McFadden 2004; San Martin 2004; Szabolcsi 2006, 2009a,b).

Some of the clearest evidence that the distribution of PRO is not conditioned by Case Theory comes from observations that PRO bears case. Arguments for standardly case-marked PRO (often) rely on the phenomenon of case concord. Predicates, emphatic pronouns, reflexives, floating quantifiers and classifiers inflect for case, in a number of languages. The morphological case they display matches the case of the DP with which they are associated. Thus, when these items are subject-oriented, they can indicate the case of PRO (Landau 2006). Consider the examples in (18).

(18) *Case concord reveals the Case of PRO*

a. *Icelandic* (Sigurðsson 1991)

Strákarnir vonast til [að PRO vanta ekki **alla** í skólann]
the.boys.NOM hope for PRO.ACC to.lack not **all.ACC** in the.school
 'The boys hope not to be all absent from school.'

b. *Hungarian* (Tóth 2000)

Illentlenség volt Mari-**tól** [PRO ilyen türelmetlen-**nek** lennie]
 impoliteness was M.-ABL PRO.DAT so impatient-DAT to.be.3S
 'It was impolite of Mary to be so impatient.'

- c. *Greek* (Philippaki-Warbuton & Catsimali 1999)

Anangasan tin **Eleni** [PRO na milisi afti **i idhja**]
 forced.3P the E.ACC PRO.NOM PRT speak.3S she herself.NOM
 ‘They forced Helen to speak herself.’

As case concord on the floated quantifier (18a), predicative adjective (18b), and reflexive (18c) reveal, PRO bears case that need not match that of the controller, suggesting it receives standard Case independently.

The fact that PRO is able to receive Case as realized on elements that display case concord with it support the idea that the subject of control infinitives is PRO due to properties of C^0 and/or T^0 . It cannot be because control verbs cannot assign Case or because PRO cannot receive it (e.g. Sigurðsson 1991, Chomsky & Lasnik 1995, Marantz 1991/2000, Landau 2004 *et seq.*). The facts are also consistent with proposals that aim to eliminate PRO entirely from the grammar, treating the gap in the infinitival subject position in (17a,b) as a position from which the controller has moved (e.g. Bowers 1973/1981; Wehrli 1981; Hornstein 1999 *et seq.*). Again, despite initial success, the Case Filter does not appear to be necessary to capture the distribution of infinitival subjects.

As the discussion above has illustrated, Case Theory and the driving force of satisfying the Case Filter advanced the understanding of a number of unrelated theoretical issues. Despite these early successes, subsequent work has uncovered shortcomings of Case Theory. In the majority of work since the turn of the century, Case has been taken to play an insignificant role compared to ‘uninterpretable features’ on functional heads. It is the need to render these features valued and interpretable that is held to drive the course of the derivation. On such views, Case may serve solely as a condition on Agree or Move (e.g. Chomsky 2000, 2001), arise “for free” in the syntax (e.g. Preminger 2011, 2014), or be eliminated entirely from syntax (e.g. Marantz 1991/2000, McFadden 2004, Bobaljik 2008, Sigurðsson 2009). Each of these possibilities entails that Case plays little to no role in determining the distribution of nominals. Contrary to these views, I will argue that a form of the Case Filter is real and that Case considerations do (help to) determine the form and distribution of nominals.

1.3 The Case Filter is real

In this dissertation, I argue that consideration of the needs of nominals cannot be completely eliminated from the calculation of well-formed derivations. The argument presented below is unlike canonical Case-theoretic arguments. Most arguments that employ or argue for the Case Filter proceed as follows: identify a well-formed syntactic structure, add a noun phrase that should be licensed within that structure as far as morphological/semantic needs are concerned, observe that such a nominal nevertheless is unable to be licensed, and relate the licensing failure to a failure to assign Case. Instead, this dissertation is concerned with those noun phrases that cannot possibly receive Case at all, as they lack the functional architecture necessary to host [u Case].

In the AGREE framework (e.g. Chomsky 2000, 2001), nominal licensing, (1a), is achieved when an unvalued Case-feature, [*uCase*], is valued by entering into a dependency with an appropriate functional head. I term this requirement *the common Case Filter*. The common Case Filter is a subcase of a general requirement that all unvalued features, [*uF*], be valued. Contrary to the commonly held view that [*uF*] must be deleted and/or valued. I maintain that [*uF*] can survive the derivation. The presence of unvalued features at the interfaces does not, in general, cause syntactic derivations to crash (Preminger 2011, 2014). Nevertheless, (a version of) the Case Filter is still necessary. I examine those nominals which are structurally reduced and incapable of hosting [*uCase*]. I show that in the absence of [*uCase*], nominals display unique distributional requirements. These requirements are indicative of an alternative licensing strategy that satisfies the proposed Case Filter. On this view, the Case Filter (10) is not a statement regarding the valuation of Case, as in (19).

(19) ***Common Case Filter***

*[Noun Phrase _[*uCase*]]

Rather, I argue that the Case Filter should be understood as a constraint on nominal size, as in (20).

(20) ***Proposed Case Filter***

Noun Phrases must be KPs.

I contend that K^0 is abstract Case. It is the syntactic property of noun phrases that captures aspects of their distribution that do not follow from their morphophonological or semantic form.

The majority of this dissertation is concerned with licensing without Case. Specifically, it is concerned with exploring the alternative licensing strategies that can be employed when (20) is violated. That such strategies exist suggests that nominals without Case, i.e. K^0 , are ill-formed, as captured by (20). As an informal demonstration of the types of data I am chiefly concerned with, consider (21) below. The Polynesian language Tongan, like its close relative Niuean, displays a phenomenon called *pseudo noun incorporation* (e.g. Ball 2004, 2009). Compare the canonical transitive clause (21a) to the pseudo noun incorporation clause (21b). In (21a), the word order of the clause is VSO, this construction and the language, more generally, instantiates an ergative absolutive case alignment and the adjective *ki'i* ‘small’ can appear either before or after the noun *manioke* ‘cassava’ that it modifies. In (21b), the word order is VOS, the subject is marked with absolutive case, and the possible positions for the adjective modifying the direct object are reduced – the adjective must follow the noun.

(21) ***Tongan NP-internal word order variation*** (Ball 2004).

- a. Na'e tō 'e Sione 'ene (**ki'i**) manioke (**ki'i**)
 PST plant ERG S. his (**small**) cassava (**small**)
 'Sione planted his small cassava.'

- b. Na'e tō (*ki'i) manioke (ki'i) 'a Sione
 PST plant (*small) cassava (small) ABS S.
 'Sione planted small cassava.'

It is commonly maintained that objects of pseudo noun incorporation constructions do not receive Case, possibly because they are too small to host the necessary projection that bears [*u*Case] (e.g. Massam 2001). I defend this analysis below. What is surprising is the sudden restriction on nominal-internal word order, an unexpected consequence under most analyses of the phenomenon. I argue that this restriction is attributable to an alternative licensing strategy that must be enforced when a noun phrase violates the Case Filter, as proposed in (20). The head of the Caseless noun phrase must adjoin to the verb, requiring strict linear head-head adjacency between the two. Adjoining the nominal head to the verb, I posit, renders it effectively non-nominal, obviating the proposed Case Filter – in other words, licensing the nominal without Case.

By arguing that data like (21) and related phenomena arise in response to a violation of the Case Filter, as stated in (20), I demonstrate that the Case Filter is real. Furthermore, by evaluating the conditions on the application of alternative licensing strategies, I diagnose the modular and derivational locus of the Case Filter. Specifically, I show that at least some of the alternative licensing strategies employed to satisfy the Case Filter must occur post-syntactically. As such, the Case Filter may itself be evaluated post-syntactically – at PF. These conclusions have ramifications both for our understanding of what Case does and why it should exist.

Nevertheless, I will also show that [*u*Case] is relevant in determining, or at least helping to determine, the form of nominals. How [*u*Case] is valued within the narrow syntax, if it is valued at all, plays a role in nominal morphology.

The result of the argumentation in this dissertation will be a recharacterization of the core components of Case Theory (1). I suggest that nominal licensing and nominal morphology should be modeled as in (22).

(22) *Core components of Case Theory*

- a. *Noun Phrase Licensing*
 Noun phrases must be KPs.
- b. *Noun Phrase morphology*
 [*u*Case]-valuation influences case morphology.

1.4 Organization of the dissertation

The remainder of the dissertation is organized into seven chapters.

Chapter 2 argues that [*u*Case] can survive to the interfaces of a well-formed syntactic derivation. This conclusion renders the common Case Filter untenable. There can be no requirement that [*u*Case] be valued. First, I establish the locus of [lit *u*Case] arguing that the complete extended nominal projection is a KP (e.g.

LaMontagne & Travis 1987; Bittner & Hale 1996a,b). The highest projection, headed by K^0 , hosts [*uCase*]. Nominals that are full KPs automatically satisfy the proposed Case Filter. Consequently, any nominal that is smaller than KP will lack [*uCase*] entirely, and necessarily violate the Case Filter, unless rescued in some way. Second, I argue that [*uF*] can survive the derivation. If [*uF*] can generally survive the derivation, the common Case Filter is invalidated. A noun phrase that contains [*uCase*] but could not have valued it should therefore be well-formed. Finally, I present a specific mechanism for how [*uCase*] is valued during the course of the derivation, and in what instances [*uCase*] will survive.

Chapter 3 begins the investigation of the behavior of noun phrases smaller than KP, briefly introduced above. I begin by examining the behavior of structurally reduced noun phrases in pseudo noun incorporation constructions. These constructions are formed when a structurally reduced noun phrase is merged as a direct argument of the verb. Structural reduction is indicated by the inability to receive Case and, in many cases, host other elements associated with higher positions within the articulated nominal structure. Such arguments exhibit a unique property. They must display head-head adjacency with the verb. This requirement is unexpected even, I will show, under common pseudo-incorporation analyses, and I suggest that it arises in the absence of K^0 . A similar head-head adjacency requirement, is attested on *in situ* subjects of the Austronesian languages Balinese and Malagasy. Both adjacency relationships share the property of being sensitive to linear order. Elements that are hierarchically lower in the syntax, but linearized in such a way as to break up the head-head adjacency pattern, yield ungrammaticality. I take this, and other common properties of the head-head adjacency requirement to signal that the two should be modeled identically – as a response to Caselessness. If this view is correct, we can be sure that Case does affect the distribution/form of nominals, from the consequences its absence has on the resulting structure.

Chapter 4 presents an analysis of the head-head adjacency patterns identified in Chapter 3. I argue that the head-head adjacency pattern is best captured as an instance of linear adjunction, or Local Dislocation (e.g. Embick & Noyer 2001). It is the adjunction operation that serves to license the noun phrase in the absence of [*uCase*]. It is commonly held that linear order is not established until after the syntactic derivation is complete (e.g. Chomsky 1995). That the adjunction operation is sensitive to linear order therefore indicates that the Case Filter is evaluated at PF. The chapter also includes a discussion of how the distribution of Caseless, i.e. KP-less, arguments is constrained so that they are not generated in unattested positions.

Chapter 5 explores the question of whether other strategies exist to license nominals in the absence of a base-generated K^0 . I answer this question in the affirmative. The antipassive construction involves licensing a smaller-than-KP object by means of adding K^0 to a nominal that entered the derivation without it – K^0 -insertion. Noting strong similarities in a number of syntactic and semantic properties, I suggest that like pseudo noun incorporation, antipassive constructions are formed when a noun phrase that lacks K^0 enters the derivation. It is the presence of the structurally reduced nominal in both pseudo noun incorporation and antipassive constructions which triggers their common properties. The two constructions are distinguished in how they license Caseless noun phrases. The former does so under adjunction with the verb. The latter,

I suggest, does so by adding additional structure to the Caseless argument. Addition of structure may also be at play in other environments, such as *in situ* subjects in other Austronesian languages that – contrary to, e.g., Tongan – do not display a head-head adjacency requirement.

Chapter 6 addresses the determination of case morphology. Having argued that the presence of K^0 and not the valuation of [μ Case] determines nominal licensing, we might wonder if Case-features exist in the first place. I argue that [μ Case]-valuation is relevant in determining case morphology. I outline how [μ Case]-valuation can take place, and present arguments that case morphology must take place within the narrow syntax.

Chapter 7 returns to the phenomena central to Case Theory, those constructions which have received Case-theoretic accounts in the literature. Having argued in Chapter 2 that [μ Case] can survive the derivation, phenomena that have frequently received Case-theoretic accounts that rely on the inability of a nominal to value [μ Case] must be reconsidered. As discussed above in the introduction, a number of these phenomena have already received such accounts, and I review those here.

Chapter 8 concludes. In this chapter, I entertain another core question of Case Theory; why case should exist at all. The data discussed in the previous chapters certainly informs some of the previously offered answers. I suggest that the proposed Case Filter may, in fact, be a subcase of a more general requirement on licit phrase structures. The data in Chapters 3-5 indicate that nominals that are not full, that is to say not KPs, are limited in their distribution (and form). This is similar to observations that structurally reduced clausal (TP v. CP) and verbal (VP v. ν P) phrase structures are also limited in the distribution (and form). I suggest that the Case Filter be understood as an instance of a requirement that phrase structures employ complete projections. The relevant notions of *complete* and *projection* are formalized and the necessity of such a requirement is considered.

Chapter 2

Against the common Case Filter

It is commonly held that Case, the syntactic property of noun phrases that accounts for aspects of their distribution and form, is an unvalued syntactic feature – [*uCase*]. Within the general logic of feature valuation (and deletion) of the sort proposed by Chomsky (2000, 2001), [*uCase*] must be valued during the course of a well-formed syntactic derivation. Thus, the common Case Filter is a subcase of the more general requirement that all unvalued features be valued (and deleted). Nominals bearing [*uCase*] must enter into certain syntactic dependencies and/or occupy certain syntactic positions in order to value [*uCase*]. In this way, [*uCase*] is responsible for aspects of a nominal’s distribution. Nominals can only occupy those positions in which [*uCase*]-valuation can occur. Furthermore, the value provided to [*uCase*], determined by the dependency the nominal enters into, can yield distinct morphology, accounting for aspects of a nominals form.

In this chapter, I argue against the view that [*uCase*]-valuation plays any role in determining the licit placement of nominals. Preminger (2011, 2014) shows that the requirement that all instances of unvalued features be valued before spell-out to the interfaces cannot be maintained in its absolute form. Specifically, he demonstrates that [*u ϕ*] can reach the interfaces without triggering ungrammaticality. I present a novel argument that this conclusion can be reached for [*uCase*], as well. This position renders the common Case Filter, which requires that a noun phrase value its [*uCase*] during the course of the derivation, untenable. On this view, [*uCase*] cannot (help to) account for the *distribution* of nominals, because failure to value [*uCase*] does not result in ungrammaticality. I do not, however, claim that the feature [*uCase*] has no role to play in the morphosyntax of nominals. I will suggest in Chapter 6 that [*u Case*] is responsible, in part, for determining the *form* of nominals given how it is valued, if at all.

This chapter is organized as follows. First, I discuss the locus of the feature [*uCase*], suggesting it is a feature on K^0 – the highest nominal projection. Second, I briefly present Preminger’s argument that [*u ϕ*] need not be valued during the course of the derivation. So long as valuation is attempted, the result is always acceptable. Third, I extend Preminger’s logic to [*uCase*]. I provide a novel argument that [*uCase*] can survive the derivation. The conclusions of this chapter, while rendering the common Case Filter untenable,

are consistent with the proposed Case Filter, which demands the presence of certain nominal architecture, and has nothing to do with feature-valuation. In subsequent chapters, I will argue that the proposed Case Filter is correct.

2.1 In support of KP

If [*uCase*] plays any role in determining either the distribution or form of nominals, its location within the nominal must be established. This chapter begins with a brief aside concerning the functional architecture of the nominal domain. For the purposes of this dissertation, I take the highest head in the nominal extended projection to be K^0 (Siegel 1974; Travis & LaMontagne 1986, 1987; Bittner 1994; Loebel 1994; Bittner & Hale 1996a, b; Lyons 1999; Bayer et al. 2001). K^0 hosts [*uCase*].¹ The postulation of a separate syntactic layer corresponding to Case alone, rather than coinciding with DP-level properties, is not simply stylistic. As I will show in subsequent chapters, full KPs contrast with structurally reduced noun phrases, with both NP and DP counting as structurally reduced. If the only size distinction available to nominals was NP or DP, no immediate explanation would be available for why these DPs and NPs *both* behave as if they lack Case. In this section, I discuss some previous arguments in favor of the KP analysis. The rest of the dissertation can also be taken as an argument in favor of that analysis, as well.

If [*uCase*] is hosted on a dedicated syntactic head, then it is expected, at least in some languages, to be realized as a free morpheme, ordered wherever the head of a projection is ordered in that language, so long as the realization of the head, i.e. case morphology, is not obscured by morphological processes (Bittner 1994, Bittner & Hale 1996a,b). This possibility is indeed found. For example, in the head-final languages Miskitu (Misumalpan; Nicaragua) and Shokleng (Ge; Brazil) (accusative and ergative, respectively), overt K^0 is final in the noun phrase (1). Similarly, case morphology is initial in noun phrases in the head-initial languages Khasi (Austroasiatic; India) (accusative) and Samoan (Polynesian) (ergative) (Bittner 1994), as in (2).

(1) *Case is final in head-final languages* (Bittner & Hale 1996b)

a. *Miskitu*

Waitna ba [sula ba **ra**] kaik-an.
 man the deer the ACC see-PST.3S
 ‘The man saw the deer.’

b. *Shokleng*

[Ti **tõ**] ε kuyan tε kupe wã.
 he ERG his body the wash PRG
 ‘He is washing his body.’

¹ However, it may host additional features, as well. For instance, Norris (2014) provides a theory of nominal concord in which all ϕ -features are collected on K^0 .

(2) **Case is initial in head-initial languages** (Bittner & Hale 1996b)

a. *Khasi*

Ka la yo''ii [ya 'u khlaa].
she PST see ACC the tiger
'She saw the tiger.'

b. *Samoan*

'Olo'o uli [e le teine] le ta'avale.
PRG drive ERG the girl the car
'The girl is driving the car.'

The Determiner (D^0), usually taken to be the maximal nominal projection, heads an intermediate projection in the nominal system. Following Abney (1987) who suggests that the nominal and clausal domains are analogous, the categories K^0 , D^0 , and N^0 in the nominal domain can be seen as counterparts of the categories C^0 , T^0 , and V^0 in the verbal domain. Of course, there may be additional functional architecture in both domains (e.g. Alexiadou et al. 2007, Cinque 2010). However, such fine grained details are not of immediate concern. What is necessary, for now, is to establish the existence of K^0 as the highest nominal head.

The conception of Case as the nominal counterpart of the verbal functional head C^0 , and thus as the highest projection in the nominal extended projection, receives support from parallels between 'Case drop' and 'Comp drop' phenomena in Japanese. Lamontagne & Travis (1987) observe that the possibility of non-overt realization of the Japanese accusative case morpheme *-o* is subject to an adjacency condition, which the established functional head C^0 is also obeys. Both the complementizer *te* and the accusative case morpheme *-o* can be null, but only when the constituents they head are adjacent to the matrix verb. If the constituent is scrambled to a non-adjacent position, C^0 (3) or K^0 (4) must be overt.

(3) **Japanese Comp drop can only occur under adjacency to the verb** (Saito 1983, 1984).

- a. Mary-ga John-ni [Koobe-ni iku (te)] yuuteta.
M.-NOM J.-DAT [K.-DAT go (that)] said
'Mary told John that she was going to Kobe.'
- b. Mary-ga [Koobe-ni iku *(te)] John-ni yuuteta (koto).

(4) **Japanese Case drop can only occur under adjacency to the verb** (Saito 1983, 1984).

- a. John-ga dare-(o) nagutta no?
J.-NOM who-(ACC) hit Q
'Who did John hit?'
- b. Dare-*(o) John-ga nagutta no?

Treating Case as a functional head K^0 , parallel to C^0 , Lamontagne & Travis capture their similar behavior.²

² Following Saito (1984), Lamontagne & Travis attribute the adjacency requirement on 'Comp drop', to the Empty Category Principle (ECP; Chomsky 1986b). A covert C^0 is an empty category, and thus subject to the ECP (Kayne 1981, Stowell 1981). Being in a non-thematic position, it can only satisfy this principle through antecedent government, and so must be c-commanded by an

Taking the patterns exemplified in (1-2) to most clearly reflect the underlying syntax of case, I adopt the KP hypothesis.³ Every full nominal projection is a KP. This position differs somewhat from that of Bittner (1994 *et seq.*). Bittner proposes that a nominal in a marked Case (accusative, ergative, or oblique) is a KP, whereas a nominal in the unmarked Case (nominative, absolutive) is K⁰-less, a bare DP or NP. Observe that nominative and absolutive nominals in (1-2) have no overt case morphology. Bittner contends that it is the absence of Case altogether that ensures the absence of overt case morphology. However, the tendency for unmarked case to be realized as null is just a tendency. A similar tendency is found in the realization of ϕ -features. 3rd person, singular morphology is often, but not always, null. However, in languages like Japanese and Niuean both marked and unmarked cases are realized overtly (5).

(5) ***Unmarked case is not always null.***

- a. *Niuean* (Massam 2001)
 Ko e tele e Sione a Sefa
 PRS kick ERG S. ABS S.
 ‘Sione is kicking Sefa.’
- b. *Japanese*
 Taroo-ga sakana-o tabe-ta
 T.-NOM fish-ACC eat-PST
 ‘Taro ate the fish.’

These patterns are unexpected on Bittner’s view. Without a K⁰, unmarked nominals should not be able to express Case morphology at all. Since these elements, in fact, can express overt Case morphology, I posit that all nominals bear a KP-layer.

I posit that there are a number of possibilities, both within a given language and cross-linguistically, regarding the Case-feature hosted on K⁰. In most instances, the Case-feature will be unvalued, i.e. [*u*Case].

antecedent governor, the verb. The c-command requirement can be met if the CP projection of the empty C⁰ is in complement position, adjacent to the verb, but not if it is scrambled. This effect may be relevant to notions of extended projection discussed in Chapters 4 and 8.

³ Languages like German, in which case morphology is expressed on the determiner itself, (i), can be understood as involving head movement of D⁰ to K⁰. More complex expressions of case morphology such as redundant case morphology on both the determiner and noun in Modern Greek, (ii), require additional operations.

- (i) ***German expresses case on D⁰*** (Santorini & Kroch 2007)

Der Mann sieht **den** Hund
 DET.NOM man sees DET.ACC dog
 ‘The man sees the dog.’

- (ii) ***Redundant case morphology*** (Santorini & Kroch 2007)

O **andr-as** vlepi **t-o** **skil-o**
 DET.NOM man-NOM sees DET-ACC dog-ACC
 ‘The man sees the dog.’

In such configurations, D⁰-to-K⁰ Head Movement may be accompanied by a process of case concord, in which case morphology hosted at K⁰ spreads to other terminals within the KP (see e.g. Richards 2013, Pesetsky 2014, Norris 2014).

Whether or not valuation will occur will depend on Case-assignment operations that will be detailed below, in Chapter 6. Alternatively, K^0 's Case-feature may also enter the derivation valued (Bittner & Hale 1996a,b). This may be the state of affairs when an adjunct appears without an overt preposition like English temporal adverbs – *the other day, this afternoon*, etc (cf. Larson 1985, Emonds 1987). This possibility will become particularly relevant in Chapter 5. Finally, it is conceivable that in some languages K^0 bears no Case-feature, at all. This may be the state of affairs for the Bantu languages, where nominals are frequently said to lack common Case Filter effects, possibly due to an absence of a Case-feature (e.g. Harford Perez 1985; Baker 2003, 2008; Diercks 2012). However, recent arguments by Halpert (2012) suggest that nominals in some of these languages, Zulu (South Africa) in particular, have Case.

Identifying K^0 as the locus of [u Case] has little ramification for the common view that the need to value [u Case] (in part) determines the distribution of nominals. That requirement does not change at all based on the locus of the feature. However, in the following sections, I demonstrate that [u Case], and [u F] more generally need not be valued. More importantly, identifying the existence of K^0 has large ramifications for the proposed Case Filter, requiring nominals to be KPs.

2.2 Feature-valuation can fail

If most instances of case morphology reflect values of [u Case] hosted on K^0 , they should be subject to the same requirements as other instances of unvalued features, [u F]. It has been proposed that the syntactic derivation cannot converge if instances of [u F] are not valued. Unvalued features are, by hypothesis, uninterpretable to the interfaces (Chomsky 2000, 2001).⁴ Such features are both unignorable and illegible. Their presence at the interfaces yields an ill-formed derivation. The operation AGREE is responsible for relating sets of features in the syntactic component, such that unvalued features can become valued during the course of the derivation, rendering them interpretable to the interfaces. Heads bearing [u F] are termed *probes*. Those bearing corresponding valued features [F] are termed *goals*. The constraints under which AGREE between an probe α and goal β can hold are given in (6).

- (6) *Agree obtains if ...*
- a. α c-commands β ,
 - b. α lacks values for features that can be supplied by the values of matching features on β ,
 - c. β lacks values for uninterpretable features,
 - d. No potential goal intervenes between α and β ,
 - e. α and β are in the same phase.

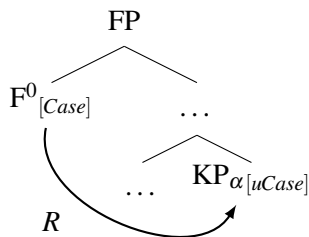
⁴ The biconditionality of feature value and interpretability – a feature is interpretable if and only if it is valued – reflects a view that the mechanisms of syntax can not inspect a feature and determine whether the semantics will or will not assign an interpretation to it, but can inspect the feature and determine whether it is valued or not (Chomsky 2000, 2001). Pesetsky & Torrego (2007) challenge this biconditionality, arguing that all four logically possible combinations of valuation and interpretability are available. Nonetheless, they hold that all uninterpretable features must enter an Agree relationship during the course of a well-formed derivation.

The first three conditions encode the directionality of Agree – the probe must c-command the goal⁵ – and state when it can apply. Note that (6c), called the Activity Condition, has been challenged empirically and is not always maintained (e.g. Baker 2003, Nevins 2004, Carstens 2010, Asarina 2011). The condition in (6d) is the Intervention Condition. It ensures that the goal that is chosen is the closest goal available, defined in terms of c-command. Finally, the condition in (6e) is a more general locality constraint, built on the assumption that the syntactic derivation proceeds in stages. The stages are called *phases*, which are sent to the interfaces to be interpreted. After this point, phases are assumed to be opaque to further operations, including AGREE.

When an Agree relation is established between a probe and goal, it supplies the values of each category’s uninterpretable features from matching features of the other category. There is some disagreement as to how AGREE alters [*uF*]. It is possible that [*uF*] is valued (and deleted) (Chomsky 2000, 2001, 2008). Alternatively, the two features may coalesce into a single, shared feature (e.g. Frampton & Gutmann 2006, Pesetsky & Torrego 2007). The second view allows for multiple [*uF*] to be part of a feature sharing relationship, such that a single goal, i.e. instance of [F], may value multiple probes, i.e. instances of [*uF*], simultaneously. The possibility of feature-sharing will become relevant below. Regardless of the specific result of AGREE, the operation serves to satisfy interface conditions on interpretability. All syntactic operations are triggered to satisfy conditions of this sort. The common Case Filter as adapted to the AGREE framework is then a subcase of this requirement; [*uCase*], like all instances of [*uF*], must be valued.

With specific regard to [*uCase*]-valuation. AGREE-based approaches state that [*uCase*] is valued on a nominal via a probe-goal relationship with a functional head. Given a designated case-assigning head F^0 , and a nominal α that is the hierarchically closest nominal c-commanded by F^0 , the case-marking associated with F^0 will be assigned to α . This is schematized in (7):

(7) *The Agree model of case assignment*



The Case-assignment relation R results in distinct values for [*uCase*] based on the identity of F^0 . Nominative case is realized under [*uCase*]-valuation with (finite) T^0 . Similarly, accusative case is realized under [*uCase*]-

⁵ There is some debate on this point. In its original formulation AGREE was held to be downward, except in exceptional instances like Case assignment which requires an instance of REVERSE AGREE (e.g. Chomsky 2000, 2001). Subsequent proposals have suggested that AGREE may be, more generally, bi-directional (e.g. Baker 2008, Bejar & Rezac 2009), or may solely apply upward (e.g. Bjorkman 2011; Zeijlstra 2012; Wurmbrand 2014, 2015; Bjorkman & Zeijlstra 2014). Here I assume that AGREE is uniformly downward. Arguments for this view are provided by Preminger (2013) and Preminger & Polinsky (2015).

valuation with (active, transitive) v^0 , and genitive Case under [u Case]-valuation with (possessive and event-nominal) D^0 . Additional lexical Cases may be assigned by specific functional/lexical heads. Accounts of this nature have been proposed and updated, since at least Chomsky (1981). Given the general conditions on the application of AGREE in (6), the proposed Agree-relationship in (7) is surprising. The goal c-commands the probe. Chomsky (2000, 2001) proposes that the Case assignment relation R in (7) is parasitic on a simultaneously established relation of ϕ -feature agreement between F^0 and α . The ϕ -feature agreement operation is established in accordance with (6), while Case assignment under AGREE instantiates a special kind of Agree relation. The goal can have its [uF] valued against the higher, c-commanding probe as a side-effect of an independent iteration of AGREE between the probe and goal (Chomsky 2000, 2001). In addition to Case assignment, such parasitic Agree relationships may also obtain in *wh*-question formation when [uQ] on a *wh*-phrase is valued as a side-effect of [uWh] valuation on C^0 . On other theories of the directionality of AGREE (see fn. 5), Case assignment may not be treated as side-effect of ϕ -agreement, but rather as an independent application of AGREE.⁶

Against this commonly adopted position, in this section, I present an argument from Preminger (2011, 2014) against the view that well-formed derivations arise as a response to constraints on interface interpretability alone. [uF], specifically [$u\phi$] can survive the derivation, without yielding ungrammaticality. If the logic of [$u\phi$]-valuation can be extended to [u Case]-valuation, then the common Case Filter is untenable. If [u Case] can survive the derivation, the distribution of nominals cannot be constrained by a requirement that [u Case] be valued.

The patterns of ϕ -agreement realized in Kichean Agent Focus constructions are at odds with interpretability-driven syntactic computation (Preminger 2011, 2014). The Kichean languages (Mayan) are head-marking, displaying an ergative-absolutive agreement alignment and no case morphology, as in (8).

(8) *Kichean ergative-absolutive agreement*⁷ (Preminger 2014)

- a. Rat x- \emptyset -aw-ax-aj ri achin
2S CM-3S.ABS-2S.ERG-hear-ACT the man
'You heard the man.'
- b. Ri achin x- \emptyset -uk'lun
the man CM-3S.ABS-arrive
'The man arrived.'

The single argument of the intransitive predicate *uk'lun* 'arrive' triggers the same morphology on the verb, \emptyset -, as the object of the transitive predicate *ax* 'hear'.

Kichean languages also display a construction termed *Agent Focus* (AF) in which the ergative-absolutive agreement alignment is obscured. The construction can be seen as a response to a restriction against es-

⁶ Bošković (2002, 2007) provides an alternative means of eliminating REVERSE AGREE. I discuss his proposals in Chapter 7.

⁷ All examples given here are from the Kichean language Kaqchikel (Guatemala).

tablishing \bar{A} -dependencies with transitive subjects – an instance of syntactic ergativity.⁸ In Agent Focus constructions, a particular suffix is realized on the verbal stem, and only one agreement marker is realized on the verb.

(9) ***Second person supercedes third person in AF agreement*** (Preminger 2014)

- a. Ja rat x-**at**/*- \emptyset -ax-an ri achin
 FOC 2S CM-**2S**/***3S**.ABS-hear-AF the man
 ‘It’s you that heard the man.’
- b. Ja ri achin x-**at**/*- \emptyset -ax-an rat
 FOC the man CM-**2S**/***3S**.ABS-hear-AF 2S
 ‘It’s the man that heard you.’

In (9a), the Agent is 2nd person and the Patient is 3rd person. In (9b), the arguments are switched. The Agent is 3rd person and the Patient is 2nd person. Nevertheless, the agreement morphology realized on the verb is identical. Regardless of thematic role, the 2nd person argument is cross-referenced by the sole agreement marker. The behavior of plural agreement is similar to that of person agreement (10).

(10) ***Plural supercedes singular in AF agreement*** (Preminger 2014)

- a. Ja rje’ x-**e**/*- \emptyset -tz’et-ö rja’
 FOC 3P CM-**3P**/**3S**.ABS-see-AF 3S
 ‘It was them that saw him.’
- b. Ja rja’ x-**e**/*- \emptyset -tz’et-ö rje’
 FOC 3S CM-**3P**/**3S**.ABS-see-AF 3P
 ‘It was him that saw them.’

A plural argument takes precedence in controlling agreement over a singular one. In (10a), the Agent is plural and the Patient is singular. In (10b), the Agent is singular and the Patient is plural. Regardless of the thematic role of the plural argument, it controls agreement.

The examples in (9) and (10) illustrate that which of the two core arguments controls ϕ -agreement in an AF clause is not determined by thematic role. Considering all possible combinations of person (1st, 2nd, 3rd) and number (singular, plural), the following hierarchy emerges for determining the controller of agreement (Dayley 1978, Norman & Campbell 1978, Smith-Stark 1978).

(11) ***Kichean AF agreement hierarchy*** (Preminger 2014)

1st/2nd person \gg 3rd person plural \gg 3rd person singular

The type of agreement attested in Kichean AF, in which an agreement marker can be triggered by a given feature on subject or object (or both), instantiates what has been called *omnivorous agreement* (Nevins 2011).

⁸ In this respect, the construction is similar to the antipassive, which Kichean languages also employ, but the two can be distinguished (e.g. Smith-Stark 1978, Craig 1979, Aissen 2011).

If the AF clause contains a 1st/2nd person argument, the verb agrees with that argument in both person and number. If not, and the AF clause contains a 3rd person plural argument, the verb agrees with that argument in number (and person). If the clause only contains 3rd person singular arguments, the verb bears null, 3rd person singular absolutive agreement.⁹

Preminger (2011, 2014) suggests that the realization of person and number morphology in Kichean AF can be captured as follows: the clause contains heads that bear unvalued person, [$u\pi$], and unvalued number, [$u\#$], features. The heads that bear these two features are independent, permitting independent probing (Shlonsky 1989, Laka 1993, Taraldsen 1995, Sigurðsson 1996, Anagnostopoulou 2003, Béjar 2004, Sigurðsson & Holmberg 2008). Values for person and number are privative (Harley & Ritter 2002, McGinnis 2005, Béjar & Rezac 2009). 1st and 2nd person arguments bear [π]. 3rd person arguments do not. Plural arguments bear [$\#$]. Singular arguments do not. A 3rd person singular argument instantiates the complete lack of [ϕ]. Arguments which lack the relevant features will be ‘skipped over’. This skipping over is exactly what occurs in *wh*-question formation, in which *wh*-probes ignore non-*wh*-elements. As such, a 1st or 2nd person argument will always trigger agreement, because 3rd person arguments lack [π]. Similarly, the plural argument will always control agreement, because singular arguments lack [$\#$].^{10,11}

⁹ AF constructions do not permit any combination of participant arguments, regardless of the verbal morphology realized (i).

(i) ***Kichean AF person restriction*** (Preminger 2014)

- a. *Ja rat x-**in-at-0**-ax-an yin
 FOC 2S CM-**1S/-2S/-3S**.ABS-hear-AF 1S
 ‘It was you that heard me.’
- b. *Ja yin x-**in-at-0**-ax-an rat
 FOC 1S CM-**1S/-2S/-3S**.ABS-hear-AF 2S
 ‘It’s you that heard me.’

These patterns are reminiscent of Person Case Constraint violations in other languages (Perlmutter 1971; Bonet 1991, 1994 and much subsequent work). Preminger (2011, 2014) extends Béjar & Rezac’s (2003, 2009) analysis of the PCC to the Kichean data.

¹⁰ Combinations of two participant arguments are unavailable, because such configurations violate Béjar & Rezac’s (2003) Person Licensing Condition, under which participant arguments must be enter an Agree relationship. With only one instance of [$u\pi$] in AF clauses, one of the two participant arguments is bound to not enter the requisite Agree relationship.

¹¹ The mechanics of ϕ -agreement in Kichean AF, as summarized here, leave open an unattested possibility. If an AF clause involves a 3rd person plural subject and a participant object, we might expect to find morphology reflecting both arguments: plural morphology reflecting the subject, which provides a value for [$u\#$] but not for [$u\pi$], and participant morphology for the object, which does provide a value for [$u\pi$]. This is not attested. 1st plural morphology is realized (i).

(i) ***Number and participant agreement do not cross-reference different arguments*** (Preminger 2014)

- Ja **rje'** x-**oj-tz'**et-ö **röj**
 FOC **3P** CM-1P.ABS-see-AF **1P**
 ‘I was them who saw us.’

Noting the near identical appearance of pronouns and absolutive participant agreement morphology, as well as other clitic-like behavior, Preminger (2011, 2014) suggests that participant agreement is, in fact, clitic doubling rather than agreement. Clitic doubling of the participant argument obscures number agreement. This distinction is orthogonal to our present concerns regarding the correct treatment of feature-valuation. Following Béjar & Rezac (2003), Preminger holds that ϕ -agreement with the participant argument must precede clitic doubling. If this is true, then everything that is said of participant agreement still holds here.

The argument that [*uF*] can survive the derivation is based on a simple observation. Plural and participant agreement morphology are obligatory whenever possible in Kichean AF, but ungrammaticality does not arise when such morphology cannot be realized. When a plural argument is present in the AF clause, the verb must bear the relevant agreement morphology. Ungrammaticality arises otherwise, as in (12). In examples with two singular arguments, no plural morphology is realized, unsurprisingly, as in (13).

(12) *Plural agreement in AF is obligatory when possible* (Preminger 2014)

- a. Ja rje' x-*e*/*- \emptyset -tz'et-ö rja'
 FOC 3P CM-3P/-3S.ABS-see-AF 3S
 'It was them that saw him.'
- b. Ja rja' x-*e*/*- \emptyset -tz'et-ö rje'
 FOC 3S CM-3P/-3S.ABS-see-AF 3P
 'It was him that saw them.'

(13) *Absence of plural arguments yields singular agreement* (Preminger 2014)

- a. Ja ri tz'i' x- \emptyset -etzel-an ri sian
 FOC the dog CM-3S.ABS-hate-AF the cat
 'It was the dog that hated the cat.'
- b. Ja ri xoq x- \emptyset -tz'et-ö ri achin
 FOC the woman CM-3S.ABS-see-AF the man
 'It was the woman that saw the man.'

The obligatoriness of agreement in (12) is captured under an interpretability-driven approach, i.e. an approach that requires that [*uF*] be valued, as follows: the number phrase #P enters the derivation with [*u#*]. This feature, in its unvalued/uninterpretable state, cannot be part of a well-formed derivation that is delivered to the interfaces for interpretation. Only by establishing an Agree relation with an element bearing [#] can [*u#*] be valued, yielding an interpretable, well-formed derivation. On this view, the well-formedness of (13) is surprising. There is no element bearing [#]. Recall that as a privative feature, [#] is only present on plural arguments. This assumption ensures that singular arguments are skipped over when agreement is determined in AF clauses. As such, [*u#*] on #⁰ is expected to remain unvalued throughout the derivation, yielding ungrammaticality, contrary to fact. The node that checks the relevant features on #⁰ in (13) must be formally singular, but [*u#*] in Kichean must systematically ignore formally singular nodes. The relevant features on #⁰ could not have been checked at all – and yet the clauses are well-formed. [*u#*] survives the derivation.

The same argument is made from the behavior of participant agreement, but with some complications that I do not repeat here. In short, 3rd person arguments must be skipped over in a clause containing a participant argument, as in (9). However, ungrammaticality does not arise in the absence of a participant argument, when [*u π*] remains unvalued. Like [*u#*], [*u π*] survives the derivation.

Preminger is careful to observe that these conclusions are not forced by the adoption of privative features. Any approach to ϕ -agreement in Kichean AF based on probing requires some means of ensuring that

singular and/or 3rd person nodes are ignored by the relevant ϕ -probe. Without this consideration, probing should target singular/3rd person arguments. If probing is only initiated to achieve interface interpretability and singular/3rd person arguments can provide such interpretability something else must be said to explain why they do not suffice and why $\#$ - and π -probes look past such arguments in Kichean AF clauses.

The realization of ϕ -agreement morphology in Kichean AF demonstrates that $[u\phi]$ may survive the derivation. What is required of well-formed derivations is attempted ϕ -probing, not successful ϕ -probing. Instances of gratuitous non-agreement, as in (12), where viable targets are present, but no Agree relationships are established are not ruled out due to the uninterpretability of $[u\phi]$, but due to the fact that probing was not attempted. If it had been, it should be reflected in the morphology. Preminger presents further arguments from Zulu and Basque that also argue in favor of the view of feature-valuation required by the Kichean AF data. Other arguments to this end can also be found in the literature (e.g. Schütze 1997, Anand & Nevins 2006, Bobaljik & Branigan 2006, Sigurðsson & Holmberg 2008, Sigurðsson 2010). I direct the reader to the cited works for details.

In Section 2.1, I suggested that $[uCase]$ is hosted at K^0 . If Case is an instance of $[uCase]$, it is plausible that it behaves like other features with respect to valuation. All things being equal, $[uCase]$, like $[u\phi]$, should be able to survive the derivation in the absence of a relevant goal. In such a model, the common Case Filter holds no force in determining well-formed derivations. However, the place in the grammar where C/case assignment applies is controversial. This debate is, in fact, a point of departure for this dissertation. Some have argued that case assignment is a purely morphological operation (e.g. Marantz 1991/2000, McFadden 2004, Bobaljik 2008, Sigurðsson 2009). I address this debate directly in Chapter 6, where I present arguments that morphological case is determined within the narrow syntax. In short, I argue that morphological case is the realization of Case-feature values hosted on K^0 . For now I will assume this position, leaving discussion of where morphological case assignment occurs and how $[uCase]$ is valued for later. In the next section, I illustrate that $[uCase]$, just like other instances of $[uF]$ can survive the derivation.

2.3 Unmarked case is $[uCase]$

Having established that (certain instances of) $[uF]$ can reach the interfaces in a well-formed derivation, I demonstrate that $[uCase]$ can, as well. Specifically, I demonstrate that unmarked case – i.e. nominative/absolutive case – should be modeled as the realization of a Case-feature that has remained unvalued throughout the syntactic derivation. Adopting this position allows us to capture a previously unexplained pattern of syncretism attested in the verbal morphology of the Formosan languages (Austronesian).

2.3.1 The relationship between Voice and case

Formosan languages, like many other Western Austronesian languages, display what has been called a *Voice system*.¹² I capitalize the term *Voice* to distinguish it from more familiar active-passive voice alternations. Unlike active-passive alternations, no argument is demoted in Voice alternations. Voice systems are characterized by the fact that a single, possibly non-core argument of the clause – *the Pivot* – is privileged in certain ways. The Pivot may be in a certain linear position and/or receive a particular morphological marking, and dedicated morphology on the verb indicates which argument was chosen for this special status. Furthermore, \bar{A} -extraction is often limited to the Pivot. In this section, I concentrate on the specific alternations in verbal morphology. In Chapter 3, we will return to Austronesian Voice systems turning to the question of how the behavior of the external argument is affected by Voice.

By way of example, consider the Voice system of Squliq Atayal, exemplified in (14). The sentences all describe Tali eating fish, but vary in word order, case marking, and verbal morphology.

(14) *Voice alternation in Squliq Atayal* (Liu 2004)¹³

- | | | |
|----|--|---------------------------------------|
| a. | M -aniq qulih qu' <i>Tali</i> .
SV-eat fish QU <i>Tali</i>
'Tali eats fish.' | Subject Voice (SV) |
| b. | Niq- un na' Tali' qu' <i>qulih qasa</i> .
eat- OV CS Tali QU <i>fish that</i>
'Tali ate the fish.' | Object Voice (OV) |
| c. | Niq- an na' Tali' qulih qu' <i>ngasal qasa</i> .
eat- LV CS Tali fish QU <i>house that</i>
'Tali eats fish in that house.' | Locative Voice (LV) |
| d. | S -qaniq na' Tali' qulih qu' <i>qway</i> .
IV -eat CS Tali fish QU <i>chopsticks</i>
'Tali eats fish with chopsticks.' | Benefactive/Instrumental Voice (B/IV) |

In each example, one argument of the verb (in italics) is in sentence-final position preceded by the marker *qu*. Voice morphology on the verb (in bold) reflects this choice of argument. It is common for Philippine and Formosan languages to have four or five distinct Voices.

The behavior of Voice morphology can inform our understanding of the nature of [*uCase*]-valuation, because Voice reflects [Case]-valuation in a process commonly termed *Case-Agreement* (e.g. Chung 1994, 1998; Richards 2000; Pearson 2001, 2005; Rackowski 2002; Rackowski & Richards 2005). In general, Case-Agreement approaches to Voice morphology hold that, first, all arguments undergo [*uCase*]-valuation in their base positions, assigned either by the licensing head or through a structural case mechanism. Next,

¹² The Voice system has been made famous by Philippine languages, although the basic description also applies to a range of Formosan and Western Malayo-Polynesian languages.

¹³ Glosses and translations are modified. It is most common in the Philippine and Formosan literature to refer to Subject Voice and Object Voice as *Actor Voice* and *Patient Voice*, respectively.

one argument is promoted to Pivot after Agreeing with a specific functional head that bears the requisite Case-Agreement feature [*uCAGR*], resulting in the case-value of that argument being copied onto the functional head. The Case feature is then spelled out on the verb as Pivot-marking – i.e. Voice. Different approaches to the Case-Agreement account have posited different hosts for [*uCAGR*], including C^0 (Chung 1994, 1998; Richards 2000; Pearson 2001, 2005), T^0 (Rackowski 2002, Rackowski & Richards 2005), and v^0 (Wurmbrand 2014, 2015).

In Subject Voice derivations, the external argument is targeted by [*uCAGR*] in its base-position, valuing [*uCAGR*] with the subject Case-feature. In non-Subject Voices, the argument to be promoted to Pivot must first undergo movement to a position, where it will be the most local goal for probing by the functional head bearing [*uCAGR*]. This movement is frequently modeled as EPP-driven movement, akin to object shift. If the direct object is promoted to Pivot, the EPP-feature will place it above the subject and successful [*uCAGR*]-valuation will reflect the case-value of the object. If a non-core argument is to be promoted to Pivot, it must be introduced by an applicative head rather than a preposition (Rackowski 2002), in order to render the argument a viable goal for probing by [*uCAGR*]. This results in inherent case assignment to the non-core argument and distinct Voice morphology on the verb, following successful [*uCAGR*]-valuation against the inherently case-marked argument. Dedicated Pivot-marking morphology, such as *qu'* in (14), can be understood as reflecting the established Case-Agreement relation.

If Voice morphology reflects the value of [*uCase*] borne by Pivot, we can be sure that the Formosan languages are underlyingly nominative-accusative languages. Cross-cutting transitivity and thematic role, the same Voice morpheme cross-references Pivots that are the subjects of transitive (15a), unergative (15b), and unaccusative clauses (15c).

(15) *Voice reveals a nominative-accusative pattern* (Michael Y. Erlewine p.c.)

- a. **M**-aniq qulih qu' Tali'.
SV-eat fish QU Tali
'Tali eats fish.'
- b. Cyux **m**-'abi' qu' Tali'
PRG SV-sleep QU T.
'Tali is sleeping.'
- c. **M**-wah qu Tali
SV-come QU T.
'Tali came/comes.'

Recall from Chapter 1 that nominative-accusative case alignments are characterized by uniformly marking subjects with the same morphology regardless of the transitivity of the clause or thematic role of the subject. In a nominative-accusative alignment, nominative case is the unmarked case. As I will argue below, unmarked case is the realization of [*uCase*]. In the Formosan languages, then, it is the subject whose [*uCase*] reaches the interfaces in a well-formed derivation.

Before proceeding with the argument that unmarked case is best modeled as the realization of [*uCase*], it

should be noted that the proper modeling of Voice morphology is a hotly contested issue amongst Austronesian linguists. Contrary to the Case-Agreement view of Voice, it has been suggested that Voice morphology corresponds distinct ‘flavors’ of certain functional heads. Guilfoyle et al. (1992) propose that Voice morphemes are functional heads. In all Voice constructions, all but one of the arguments of the clause are inherently Case-licensed, remaining in their base-position. Whichever argument is not inherently licensed must be promoted to Pivot position to be licensed. Guilfoyle et al. (1992) hold that the functional head realized as Voice varies based on which argument is not inherently Case-licensed. Object Voice is a high functional head that inherently Case-licenses the subject. Subject Voice is a low functional head that inherently Case-licenses the object. A series of more recent proposals hold that Voice is uniformly the realization of flavors of v^0 (or Voice0) (e.g. Aldridge 2004, 2008; Legate 2008, 2012, 2014). This family of approaches is sometimes referred to as the *Ergative Hypothesis*. Depending on the flavor utilized, different arguments within vP (or VoiceP) may be targeted for EPP-driven movement to the phase edge. The highest argument is subsequently targeted for promotion to Pivot, capturing the syntactic privilege of the argument cross-referenced by Voice.

I maintain that the Case-Agreement approach for the treatment of Formosan Voice morphology here. The argument presented supports the Case-Agreement approach, because it provides of Voice morphology syncretism is not available under the Ergative Hypothesis. Also, see Erlewine, Levin, and Van Urk (2015) for a recent critique of the Ergative Hypothesis.

2.3.2 Voice morphology in Restructuring Infinitives

Voice morphology is realized in Formosan restructuring infinitives. Such infinitives are commonly modeled as being structurally reduced phrasal complements, i.e. not CPs, selected by a lexical verb. The exact size of restructuring infinitives has been debated. Wurmbrand (2001) suggests that restructuring infinitives are uniformly VP-complements. Restructuring infinitives have also been modeled as vP -complements (e.g. Bhatt 2005, Legate 2012, Wurmbrand 2014). Of course, cross-linguistic variability is also a possibility (Wurmbrand 2015). Crucially, this small infinitive does not contain its own external argument, the logical subject of the event described by the infinitive is understood as identical to that of the matrix clause. Furthermore, restructuring infinitives do not display independent tense and/or aspect specifications. In some languages negation is also disallowed. A number of recent works have identified restructuring infinitives in a number of Formosan languages (e.g. Li 2009; Chen 2010, 2013; Wu 2013; Chang 2014; Lin 2014; Shi 2014; Chen & Fukuda 2015).

Formosan languages fall into two groups when Voice marking in restructuring constructions is considered: (i) languages in which the matrix and embedded Voice must match (Voice concord languages), and (ii) languages in which the embedded Voice is realized as a default (Default Voice languages; hereafter DEFV) (Wurmbrand 2015). Voice concord is illustrated in (16) for Isbukun Bunun. Both predicates are marked with the same Voice-marking – Subject Voice (SV) or Object Voice (OV). The same pattern is attested in

Tsou (Chang 2014) and the non-Formosan Austronesian language Chamorro (Chung 2004).

(16) *Restructuring Voice concord* (Wu 2013)

- a. Miliskin saikin tu **ma**-baliv bunbun-cia
SV.want 1S.CS TU SV-buy banana-that.CS
'I want to buy the bananas.'
- b. Iliskin**un**-ku bunbun-a tu baliv-**un**
want.OV-1S.CS banana-that.CS TU buy-OV
'I wanted to buy the bananas.'

In contrast, in Mayrinax Atayal, the embedded verb displays consistent Voice morphology independent of the Voice of the matrix predicate (17) (Chen 2010).

(17) *Restructuring Default Voice* (Chen 2010)

- a. M.naqr*u* i t.um.uting cu bawwak i Yumin
SV.finish LNK beat.DEFV.beat CS pig KU Y.
'Yumin is finishing beating/killing pigs.'
- b. Naqaru.**un** i t.um.uting ni Yumin ku bawwak
finish.OV LNK beat.DEFV.beat CS Y. KU pig
'Yumin finished beating/killing the pigs.'

This second pattern is much more well-attested. Other Formosan languages displaying the DEFV pattern include Saaroa (Li 2009), Paiwan (Wu 2013), Squaliq Atayal (Chen 2014), Kavalan (Lin 2014), Takibakha Bunun (Shi 2014), Takituduh Bunun and Kanakanvu (Wurmbrand 2014), and Seediq, Amis, and Puyuma (Shin & Fukuda 2015). The constructions in (16b) and (17b) display instances of long object movement, in which the object of the embedded predicate is promoted into the matrix clause. Long object movement is a telltale sign of complex predicate formation, a hallmark of restructuring infinitivess cross-linguistically (e.g. Wurmbrand 2001). The matrix and embedded verbs function as a unit. In Formosan restructuring, the Voice properties of the matrix predicate determine the case and argument structure properties of the embedded object. Across Formosan languages, which employ DEFV marking on the embedded predicate of restructuring infinitives, DEFV morphology is syncretic with that of SV. Because of this, DEFV restructuring infinitives are sometimes referred to as SV- or AV-only constructions.

The realization of SV as the default is somewhat surprising, because SV does not behave like a default. It is not the citation form, nor the most frequently occurring form (e.g. Huang 1994). I suggest that the identity of DEFV and SV can be captured by adopting the view discussed above – namely that the Voice system operates on the output of the Case system, and by treating unmarked case as those instances of [*u*Case] that reach the interfaces. I argue that SV and DEFV are syncretic, because they are, in fact, the spell-out of the same featural specification, as in (18).

- (18) *Explaining Subject Voice, Default Voice syncretism*
 SV / DEFV morphology is the realization of [*uCAGR*]

I will suggest below that what distinguishes the two constructions – SV clauses and DEFV clauses – is *how* [*uCAGR*] remains unvalued. DEFV arises in restructuring infinitives because there is no [*uCAGR*] in the restructuring infinitive. I present arguments to this end below, and suggest that [*uCAGR*] is inserted post-syntactically to satisfy morphological well-formedness requirements. In this scenario, DEFV has no hope of being valued (at least via canonical AGREE relations) ensuring that it will remain unvalued. In SV clause, [*uCAGR*] is present in the syntax. However, it remains unvalued during the course of the derivation, because it targets the nominative-marked argument which itself bears [*uCase*]. A Case-Agreement relationship established with a argument that bears [*uCase*] will result in failure to value the Case-Agreement feature. Again, [*uCAGR*] will survive the derivation. Both instances of [*uCAGR*] are spelled out identically, yielding the pattern of syncretism identified above.

2.3.3 DEFV is not present in syntax

I now demonstrate that Voice morphology in restructuring infinitives is not present in the syntax. That is to say Voice morphology does not necessarily entail any particular syntactic structure involving a host for [*uCAGR*]. This conclusion is expected if Voice morphology is the realization of [*CAGR*]-valuation on C^0 (e.g. Chung 1994, 1998; Richards 2000; Pearson 2001, 2005) or T^0 (e.g. Rackowski 2002, Rackowski & Richards 2005). Both of these functional heads are uniformly barred from structurally reduced restructuring infinitives. Nevertheless, Voice morphology is realized on the embedded verb. I offer an account of this morphology as being inserted post-syntactically to satisfy a morphological well-formedness requirement.

Mayrinax Atayal provides evidence that the embedded DEFV morphology in (19) is not syntactically present. Unlike Voice morphology in CP clauses, DEFV does not restrict argument extraction possibilities (Chen 2010). In Mayrinax Atayal, as in many other Austronesian languages, \bar{A} -extraction of the object is only possible when the verb occurs in OV. Recall that the argument cross-referenced by Voice morphology is (often) syntactically privileged. The ungrammaticality of SV co-occurring with object *wh*-extraction is illustrated in (19). In matrix clauses, object *wh*-questions must be accompanied by OV (19a). SV is ungrammatical (19b). Similarly, \bar{A} -extraction of an object from an embedded CP (i.e. non-restructuring) clause is ungrammatical with SV on the embedded predicate (19c). However, in restructuring contexts, SV is necessary in the embedded predicate (19d).

- (19) *True SV block object \bar{A} -extraction* (Chen 2010)

- a. Nanuan ku tuting.**un** ni Yumin
 what KU beat.OV CS Y.
 ‘What is Yumin beating/killing?’

- b. *Nanuan ku t.um.uting i Yumin
 what KU beat.SV.beat KU Y.
 ‘What is Yumin beating/killing?’
- c. *Nanuan ku siwal.an ni tali i t.um.uting i Yumin
 what KU allow.LV CS Tali COMP beat.SV.beat KU Y.
 ‘What did Tali allow Yumin to beat/kill?’
- d. Nanuan ku naqaru.un i t.um.uting ni Yumin
 what KU finish.OV LNK beat.SV.beat CS Y.
 ‘What did Yumin finish beating/killing?’

The logical subject *Yumin* is preceded by case morphology in (19d) because it is an argument of the matrix verb, and the latter is not in SV. It is preceded by the Pivot-marker in (19c) because it cannot be an argument of the matrix predicate, and the embedded predicate is in SV. The fact that SV does not block object extraction in restructuring contexts, whereas it does, in simplex and non-restructuring complex clauses, provides evidence for DEFV being distinct from SV despite their uniform realization.¹⁴ One way in which the two could differ is if the DEFV, unlike SV, is not present in the syntax at all.

We can be sure that DEFV is, indeed, absent from the syntax, by demonstrating that the functional head that hosts [*u*CAGR] cannot be present in restructuring infinitives. Evidence exists that places [*u*CAGR] at or above the functional head that introduces aspect, Asp⁰. In the Tagalog Recent Perfective, a construction expressing a recently completed event, no XP bears *ang*, which marks the nominal tracked by Voice, and no Voice morphology is realized (McGinn 1988, Schachter 1996). As noted above, dedicated Pivot-marking like *ang* in Tagalog *ang qu* in Squaliq Atayal is a reflex of the Case-Agreement relationship. It is not directly indicative of the argument’s Case. Voice is. If Voice and concomitant *ang*-marking were determined lower than AspP, we would expect an *ang*-marked XP in (20), even if Voice morphology were to be subsequently obscured.

(20) *Aspect specification blocks Voice* (Schachter 1996)

Kabi-bigay lang ng maestra ng libro sa bata.
REC.PRF-give just CS teacher CS book DAT child
 ‘The teacher just gave a book to the child.’

This expectation is not attested. Rather, the data suggest that recent perfective aspect entirely halts Case Agreement (from T⁰ or C⁰). There are at least two way of modeling the disruption of Case-Agreement in the recent perfective. Blocking of higher probing by aspectual morphology has also been employed in modeling TAM-based split-ergativity (e.g. Laka 1993, Coon 2010). Such morphology introduces a phase boundary rendering arguments within the lower phase inaccessible for probing. Alternatively, Rackowski (2002) proposes that the recent perfective contains an instance of defective T⁰, which lacks [*u*CAGR] althogether, and does not initiate Case-Agreement. Nevertheless, I assume that the locus of [*u*CAGR] in both Tagalog

¹⁴ See Chen (2010, 2014) for additional arguments.

and the Formosan languages in question is identical, located above (or minimally at) AspP.

Having established the locus of [*u*CAGR] at or above AspP, we can prove that [*u*CAGR] is not syntactically present in restructuring infinitives by demonstrating that restructuring infinitives are smaller than AspP. Despite some variability in functional architecture, overt aspectual morphology is never attested in Formosan restructuring infinitives (e.g. Chen 2010, 2014; Chen & Fukuda 2015). This is illustrated in Squiliq Atayal (21).

(21) *Squiliq Atayal restructuring cannot host AspP* (Chen 2010)

*M-naqru i t-um-**in**-uting i Yumin cu bawaq
SV-finish LNK beat-DEFV-**PRF** KU Y. ACC pig

This behavior is expected if restructuring is modeled as complementation of a structurally reduced clause – either VP (Wurmbrand 2001 *et seq.*) or *v*P (Bhatt 2005, Legate 2012, Wurmbrand 2014) – that does not include AspP. If Voice is hosted above (or at) AspP (20) and restructuring clauses are smaller than AspP (21), we can conclude that Voice is not present syntactically in restructuring clauses. The question then arises: why and how should Voice morphology be realized on embedded predicates in restructuring clauses. In answering these questions, we find support for the view that unmarked case is [*u*Case].

In the absence of a syntactic host for Voice, I posit that Voice arises in Formosan restructuring by means of AGR INSERTION (22) (e.g. Noyer 1997, Kramer 2010, Norris 2012), because *some* Voice specification is required for morphological well-formedness. The verb cannot be bare.

(22) **AGR INSERTION schema** (Noyer 1997)

$X \rightarrow [X \text{ AGR}]$

In general, AGR INSERTION adds *unvalued features* to words/categories that do not bear the requisite feature, but require some featural specification for morphological well-formedness. The restriction to inserting [*u*F] is crucial. If insertion schemas of the sort in (22) are not restricted somehow, nothing would prevent the insertion a valued feature, yielding widely variable morphology. This mechanism is chiefly employed in explaining nominal concord operations. However, it can be easily extended to capturing the presence of Voice morphology in restructuring infinitives. In Formosan restructuring, [*u*CAGR] is added to the predicate. If the inserted [*u*CAGR] remains unvalued, it will be spelled out as morphology that is commonly termed Subject Voice.

The dichotomy between Voice concord and default Voice is captured, under this model, by whether the [*u*CAGR] is valued. In Voice concord languages, Voice morphology *spreads downwards* from the matrix verb to the embedded verb, valuing the lower CAGR-feature with a matching feature. Erlewine (2013) provides a similar proposal for Kaqchikel Agent Focus spreading. Voice matching arises because matrix [CAGR] also values the post-syntactically inserted [*u*CAGR] on the embedded predicate. In default Voice languages, spreading does not occur. [CAGR] is left unvalued.

A further prediction of this account is that Austronesan-type Voice system languages which do tolerate bare verb forms will utilize such forms on embedded predicates in restructuring infinitives, regardless of matrix verbal morphology. This pattern is attested in Acehness (Legate 2012) (23).

(23) *Acehnese restructuring does not permit Voice morphology* (Legate 2012)

Aneuk agam nyan geu-ci (***geu-**)peuréksa lé dokto
 child male DEM 3.POL-try (***3.POL-**)diagnose by doctor
 ‘The doctor tried to diagnose the child.’

The morphological well-formedness requirements of the language do not dictate that any Voice specification be added. In the absence of the relevant syntactic structure, none is realized at all.

This analysis is different, in significant respects, from that of Wurmbrand (2014). She argues that Voice is hosted on v^0 and valued via UPWARD AGREE. She takes the presence of Voice in Formosan restructuring as indicating that restructuring clauses in these languages contain vP . Leaving arguments for or against UPWARD AGREE aside (see fn. 5), the Voice concord and default Voice patterns are achieved as follows: The v^0 of restructuring predicates does not introduce an external argument, but does bear a feature akin to [$uCAGR$]. In all cases, the restructuring v^0 undergoes Head Movement into matrix V^0 capturing the semantic identity of the matrix and embedded Agent. In this higher position, the restructuring v^0 can probe upward targeting the matrix v^0 and matching its Voice specification. The two patterns are then realized by which copy of the restructuring v^0 is Spelled Out. The higher copy yields Voice concord. The lower copy, in a distinct Spell Out domain which blocks the application of upward AGREE with matrix v^0 , yields default Voice. An immediate drawback to this approach is that since the embedded V^0 and its corresponding Voice element are pronounced in different Spell Out Domains, it is necessary to allow for morpho-phonological regrouping when the two Spell Out Domains are joined together. The current proposal faces no such trouble.

2.3.4 Nominative case is [$uCase$]

DEFV is purely morphological. It is inserted when a Voice specification is required, but not supplied. When the inserted [$uCAGR$] feature is not valued via concord operations it will be spelled out. By viewing subject case as [$uCase$], we collapse the environments of DEJV and SV, capturing the identical morphology of both. Unlike DEJV, SV arises within the syntax. Full CP clauses bear the functional head that hosts [$uCAGR$]. The probe bearing [$uCAGR$] can remain unvalued during the course of the well-formed syntactic derivation if it targets a goal bearing [$uCase$]. As noted above, unvalued feature-sharing relationships are possible. If the interfaces permit [uF], both [$uCAGR$] and [$uCase$] will survive the derivation and, potentially, have some overt morphological realization. Again, the morphological realization of [$uCAGR$] is the morphology that is commonly termed Subject Voice. Other Voices are achieved via successful Case-Agreement relationships established with arguments whose Case-feature have been valued during the course of the derivation. As discussed above, those arguments can be targeted for Case-Agreement if they undergo EPP-driven movement

to the ν P edge, above the base-position of the subject.

Recall from above that SV cross-cuts both transitivity and thematic role. SV morphology cross-references subject Pivots in transitive, unergative, and unaccusative subjects. The data is repeated below.

(24) *Voice reveals a nominative-accusative pattern*

- a. M-aniq qulih qu' Tali'.
SV-eat fish QU Tali
'Tali eats fish.'
- b. Cyux m-'abi' qu' Tali'
PRG SV-sleep QU T.
'Tali is sleeping.'
- c. M-wah qu Tali
SV-come QU T.
'Tali came/comes.'

This pattern of Case-Agreement signals that subjects bear nominative case. If Subject Voice arises as the realization of an unvalued Case-Agreement feature. Then it is the nominative element that bears an unvalued Case feature. Confirming the claim that unmarked case is unvalued Case. Also, see Kornfilt & Preminger (to appear) for another argument to this end.

The generalization that DEFV is identical to SV is unexpected if the form of DEFV is simply a language-specific choice made to achieve morphological well-formedness of the embedded verb. In principle, each language could employ a distinct Voice in the case of a default, yielding wide cross-linguistic variability. Treating both as the realization of [u CAGR] provides a principled means of capturing the cross-linguistic commonality. Furthermore, the identity of DEFV and SV provides a conceptual argument in favor of viewing Voice as Case-Agreement. On this view, the two domains can be collapsed. If Voice indicates argument structure alternations which drive the syntactic derivation (e.g. Guilfoyle et al. 1992; Aldridge 2004, 2008; Legate 2008, 2012, 2014), there is no way to collapse the two environments. If anything, the use of SV as a default in these environments is surprising, because these analyses hold that SV marked, because it indicates an antipassive clause (e.g. Aldridge 2011). On these analyses, it remains an accident that DEFV and SV are identical.

2.4 Conclusion

In this chapter, I argued [u Case] is hosted at K^0 – the highest nominal projection. I then demonstrated that (certain instances of) [u F] need not be valued during the course of the derivation. Grammaticality is achieved so long as valuation is attempted. If Case is a syntactic feature, [u Case], we expect by extension that [u Case] features can be tolerated by the interfaces, and that [u Case] will never trigger a Case Filter violation. I then demonstrated that this conclusion is indeed correct. The conclusion drawn from this line of argumentation is that the common Case Filter, repeated in (25), cannot hold.

(25) ***Common Case Filter***

*[Noun Phrase _[uCase]]

[uCase] cannot be responsible for determining the *distribution* of nominals, because [uCase] can reach the interfaces. Nevertheless, [uCase] may still be responsible for determining, in part, the *form* of nominals, based of [uCase]-valuation. All constructions deemed ungrammatical due to a failure to value [uCase] must have alternative accounts of their ungrammaticality. In Chapter 1, we saw that this conclusion has already been reached for some syntactic processes previously afforded Case-theoretic explanations, including the distribution of PRO and A-movement. I return to a more complete discussion of these phenomena, and others thought to be constrained by the common Case Filter, in Chapters 7 .

In Chapters 3, I will argue that, despite this modified view of the role of [uCase], we can identify a distinct syntactic component of nominals that does play a role in determining their distribution. K^0 is Case. Nominals that are smaller than KP, have different distributional requirements than full KPs. Crucially, it will be shown that K^0 is the relevant factor in determining these positional differences rather than other differences associated with structurally reduced nominals, e.g. interpretive differences between full KPs and reduced nominals. This suggests, as proposed at the outset, that the Case Filter is better understood as a restriction on nominals that lack KP completely; this is formulated as in (26).

(26) ***Proposed Case Filter***

Noun Phrases must be KPs

Chapter 3

Caseless adjacency

In Chapter 2, I presented an argument that [u Case], like other instances of [u F], can remain unvalued during the course of a well-formed syntactic derivation. Given this, conditions on [u Case]-valuation in conjunction with the common Case Filter – the requirement that all instance of [u Case] be valued – cannot be employed to capture *any* aspect of the distribution of nominals. Nominals need not be generated in or move to positions where [u Case] can be valued. So long as [u Case]-valuation is attempted, ungrammaticality will not arise. However, this conclusion does not mean that the notion of abstract Case should be abandoned entirely.

In this chapter, I demonstrate that K^0 is Case. In other words, the KP projection should be properly understood as the syntactic property of noun phrases that accounts for aspects of their distribution and form that does not otherwise follow from their morphophonological or semantic content. Nominals that are full KPs satisfy the proposed Case Filter (1). Nominals that are smaller than KP do not.

(1) ***Proposed Case Filter:***

Noun Phrases must be KPs

However, those nominals that violate (1) do not trigger ungrammaticality across the board. Rather, in environments where nominals lack a KP-layer, nominal distribution is constrained. Nominals that are smaller than KP, but are nonetheless well-formed constitute the exceptions that prove the rule. I posit that these nominals must employ an alternative licensing strategy that obviates the proposed Case Filter; it is possible to license without Case. When an alternative licensing strategy cannot be employed, ungrammaticality arises, because (1) is violated.

In this and the following chapter, I explore one alternative licensing strategy to illustrate the role that the presence/absence of K^0 plays in the distribution and form of nominals. I will demonstrate that those nominals that lack a KP-layer can be licensed under strict linear head-head adjacency with the verb. When a structurally diminished nominal enters the syntactic derivation, it can be licensed if it obeys the distributional requirement in (2).

(2) ***Distributional Constraint on non-KP nominals***

The highest overt head in the extended nominal projection, whatever it is, must be linearly adjacent to the verb.

When (2) is met, the derivation can circumvent (1). If (2) is not met, ungrammaticality arises due to a violation of (1). Crucially, the behavior of Caseless nominals cross-cuts any definition and assumptions of *C/case* familiar from the literature, some of which have been discussed above. Whatever the role of *C/case* in the syntactic derivation is, the nominals in question lack it. Even if the particular model of *C/case* assignment or nominal structure argued for in this dissertation is incorrect, the facts discussed below demonstrate that the distribution of nominals with *C/case* is distinct from the distribution of nominals without it, supporting the argument that Case does determine (or at least takes part in determining) licit nominal positions.

Section 3.1 begins the examination of *pseudo noun incorporation* (PNI) constructions, briefly introduced in Chapter 1. In these constructions, the object or some other internal argument is structurally reduced. The exact degree of reduction varies cross-linguistically, but, in all cases, the PNI argument is incapable of hosting certain functional architecture within the DP or KP domain. PNI objects violate the proposed Case Filter. Merging such a nominal has syntactic and semantic ramifications. The reduced nominal obeys distributional constraints, and affects case and agreement alignments. The PNI argument must be linearly adjacent to the verb (2), and does not bear case morphology like canonical arguments (Massam 2001). Simultaneously, the PNI object is often interpreted as a predicate, rather than an individual or universal quantifier. This change in interpretation has consequences for scope (Dayal 2011). In spite of this structural reduction, ungrammaticality does not arise. The proposed Case Filter is successfully obviated.

Section 3.2 discusses the distribution of PNI objects. It has been suggested that PNI objects (vacuously) satisfy the common Case Filter, because structurally diminished nominals, unlike full KPs, do not require Case-licensing. This may be because they lack [μ Case] altogether (Massam 2001). However, I present an argument that this characterization is insufficient. Following Baker (2014), I demonstrate that KP-less noun phrases in PNI constructions display a unique distributional requirement. The highest syntactic head of a nominal smaller than KP must be *linearly* adjacent to the verb, as in (2). This requirement is unexpected under common analyses of PNI, and the conditions under which this adjacency relationship is permitted distinguish it from both compounding and Noun Incorporation, which also yields noun-verb adjacency via Head Movement (Baker 1988 *et seq.*); most strikingly, the present adjacency requirement is sensitive to elements that do not intervene in the syntactic structure, but still intervene linearly. Adopting the proposed Case Filter allows us to capture the distribution of nominals that are smaller than KP. I posit that it is this adjacency requirement that permits noun phrases smaller than KP to obviate the proposed Case Filter. When the distribution and/or form of the nominal do not allow this adjacency relationship to hold, ungrammaticality arises, because a violation of the proposed Case Filter is incurred.

If linear head-head adjacency arises in the absence of K^0 , it can be used as a diagnostic to identify other arguments that are also smaller than KP. In Section 3.3, I turn to another environment in which such adjacency

is attested. As discussed in Chapter 2, Western Austronesian languages famously display a Voice alternation in which verbal morphology cross-references a unique, syntactically-privileged argument. Strikingly, some of these languages also instantiate a strict linear head-head adjacency requirement between an arguably KP-less argument and the verb. In this instance, it is the *in situ* subject, rather than the object, which demonstrates head-head adjacency. Here too, common analyses fail to capture this requirement, and I again posit that nominals which display a head-head adjacency requirement do so as a means of obviating the proposed Case Filter, and the conditions under which adjacency holds distinguish it from compounding and Noun Incorporation. Furthermore, similarities with PNI suggest that head-head adjacency in both PNI objects and *in situ* subjects should be captured by the same mechanism. In Chapter 4, I provide an analysis of the Case-Filter-obviating effects of adjacency.

3.1 PNI objects are smaller than KP

Pseudo noun incorporation, as first described by Massam (2001), obtains when the direct object merges with the verb, and does not move from its base-position to one outside of the VP. Compare a canonical transitive clause (3a) to a PNI clause (3b) in Niuean (Oceanic).

(3) *Niuean PNI* (Seiter 1980)

- a. Takafaga tūmau nī e ia e tau ika
 hunt always EMPH ERG he ABS PL fish
 ‘He is always hunting fish.’
- b. Takafaga ika tūmau nī a ia
 hunt fish always EMPH ABS he
 ‘He is always hunting fish.’

As a result of this failure to move, the object remains adjacent to the verb, and forms a very tight syntactic unit with it, moving with it to Spec-TP when VP-fronting occurs, yielding predicate-initial word order. Since the object remains adjacent to the verb and in a tight relation to it, they can be mistaken for a single word. Massam suggests that this confusion may be compounded by the phrasal phonology of the language. These behaviors can be attributed to the structural reduction of the PNI object. Indeed, if PNI is to serve as an illustration of how K^0 , or its absence, conditions well-formed derivations, it must be shown that PNI objects are smaller than KP. I will now illustrate that this is indeed so.

First, observe the change in case alignment above. In the canonical transitive (3a), the clause displays an ergative-absolutive case pattern. In the PNI structure (3b), the clause displays a non-ergative case pattern. There is absolutive case on the subject and no case morphology on the object. Recall from Chapter 2 that K^0 hosts [*uCase*] and that how [*uCase*] is valued (in part) determines the case morphology of a nominal. Given this, the change in case alignment, crucially, indicates that the object in PNI constructions lacks K^0 . As Massam (2001) shows for Niuean, ergative case morphology can only be assigned after absolutive case

is assigned to some argument in the clause. Similar approaches, which tie the realization of ergative case to the presence of another argument that requires (structural) case assignment, have been offered for ergative-absolutive patterns in a number of other languages and within a number of theoretical approaches to case morphology assignment (e.g. Yip et al. 1987, Marantz 1991, McFadden 2004, Bobaljik 2008, Woolford 2008, Maling 2009). If the object were marked with phonologically null (absolutive) case morphology, we would expect to see no change in the case morphology on the subject. The subject should remain ergative. For instance, in Tongan, an Oceanic language closely related to Niuean, absolutive case morphology is obligatory with proper names, but is optional with common nouns when followed by a specific article (e.g. Otsuka 2015). Whatever the realization of absolutive marking – overt or null – the subject remains ergative-marked in VSO contexts (4a). However, like Niuean, Tongan displays PNI, in which the subject bears absolutive case (4b).

(4) *Tongan ergative morphology is compatible with zero object-marking* (Otsuka 2015)

- a. Na'e langa 'e Sione ('a) e fale
PST build ERG S. (ABS) SPEC house
'John built a house.'
- b. Na'e tauhi pepe 'a Nisi
PST care baby ABS N.
'Nisi looked after babies.'

Regardless of the exponence of object-marking in (4a), absolutive case assignment has occurred, yielding ergative case on the subject. If PNI constructions in Niuean (3b) and Tongan (4b) were like canonical Tongan transitives, ergative case morphology would persist on the subject even if absolutive case morphology on the object in PNI constructions were null. The fact that the external argument is realized with absolutive case in (3b) and (4b), instead, indicates that the PNI object has received *no case morphology at all*. Absolutive case assignment can only fail to take place if the internal argument lacks [*uCase*] altogether.¹ If K^0 in Niuean and Tongan always hosts [*uCase*], the only means of lacking [*uCase*] is to lack KP, which will result in the complete absence of case morphology on the argument and a change in case pattern within the clause.

Languages that display a nominative-accusative alignment may also employ PNI. However, PNI does not alter the case patterns of these languages as radically. In Sakha (5) and Tamil (6), objects can surface with or without accusative case (Baker 2014). In each language, case-marked and caseless objects can occupy distinct positions in the clause, much like the case-marked and caseless objects in Niuean PNI (3). Similar observations have been made for other nominative-accusative languages including Turkish (e.g. Kornfilt 1997, Öztürk 2005), Spanish and Romanian (e.g. Dobrovie-Sorin et al. 2006).

¹ There are other conditions which may result in the suspension of canonical case assignment. An argument may receive lexical/oblique case or two arguments may be separated from each other by a case-assignment domain boundary. These conditions will be discussed in Chapter 6 where I provide a specific theory of [*uCase*]-valuation. However, Niuean and Tongan do not appear to instantiate either of these strategies.

(5) *Sakha PNI* (Baker 2014)

- a. Masha **salamaat**-(y) tūrgennik sie-te
M.NOM **porridge**-(ACC) quickly eat-PST.3S
'Masha ate the porridge quickly.'
- b. Masha tūrgennik **salamaat**-(#y) sie-te
M.NOM quickly **porridge** eat-PST.3S
'Masha ate porridge quickly.'

(6) *Tamil PNI* (Baker 2014)

- a. Maala **anda pustagatt-e** / ***pustagam** veegamaa padi-cc-aa
M.NOM **the book**-ACC / ***book**.NOM quickly read-PST-3.F.S
'Mala read the book quickly.'
- b. Maala veegamaa **pustagatt-e** / **pustagam** padi-cc-aa
M.NOM quickly **book**-ACC / **book**.NOM read-PST-3.F.S
'Mala read the book quickly.'

In Sakha, accusative-marked objects are canonically realized to the left of manner adverbs (5a). Realizing these objects to the right of such adverbs is deemed semantically bizarre (5b). Conversely, objects without accusative case *must* be realized to the right of manner adverbs (5b). Realizing these objects to the left of such adverbs is ungrammatical (5a). In Tamil the distribution of accusative-marked objects is more free. They can be realized either to the left or right of manner adverbs (6). However, just as in Sakha, caseless objects must be realized to the right of manner adverbs (6b). Realizing these arguments to the left of manner adverbs is ungrammatical (6a). The absence of Case on the object in Sakha and Tamil does not affect the case morphology of the subject. It remains nominative. This is in contrast to the ergative-absolutive alignment in Niuean (3) and Tongan (4). This difference is expected. In nominative-accusative languages, the case morphology of the subject is not affected by the absence of [*u*Case] on the object. The realization of nominative case, unlike that of ergative case, is not conditioned by the realization of another instance of case. As a consequence, the subject should always surface bearing nominative case. The defining characteristic of nominative-accusative alignments is that, *modulo* quirky case constructions, the form of subjects is invariant.

Additional support for the position that PNI objects are structurally reduced, i.e. smaller than KP and incapable satisfying the proposed Case Filter, comes from the fact these objects *often* cannot host DP-level material, while full KPs can. However, the extent to which PNI objects are reduced varies cross-linguistically.

In Niuean, PNI objects cannot include indicative relative clauses (7a), number markers (7b) or possessors (7c) (Massam 2001). Furthermore, PNI is illicit when the object is a pronoun or proper name (8).

(7) *PNIed nominals must be NPs* (Massam 2001).

- a. *Ne inu kofe **ne taute e au** a Sione
PST drink coffee N.FUT **make** ERG I ABS S.
'Sione drank coffee that I made.'

- b. *Kua holoholo **tau** kapiniu a Mele
PRF wash **PL** dishes ABS M.
'Mele washes the dishes.'
- c. *Ne vali fale **ha** Mele a Sione
PST paint house **GEN M.** ABS S.
'Sione paints Mele's house.'

(8) *PNI nominals cannot be pronouns or proper names* (Clemens 2014).

- a. *Kua onoono **au** mai a ia.
PRF look.at **1S** DIR ABS 3S
'He looked at me.'
- b. *Kua onoono **Sione** mai a ia.
PRF look.at **S.** DIR ABS 3S
'He looked at Sione.'

On various articulated views of nominal architecture, some of which were mentioned briefly in Chapter 2, relative clauses, possessors, and number morphology are all hosted above the NP-layer. Similarly, pronouns and proper names may be generated as D^0 , move to D^0 , or require the presence of DP-level material to ensure a definite interpretation (e.g. Postal 1969, Longobardi 1994, Elbourne 2001, Déchaine & Wiltschko 2002). If PNI objects cannot host these elements, we can conclude that they also cannot host a higher KP-layer.

The Mayan language Chol (Mexico), like Niuean, displays PNI, signalled by a VSO-VOS word order variation (9). PNI objects, i.e. those objects in VOS constructions, cannot host DP-layer material including demonstratives (10a), determiners (10b), or proper names with the clitic *aj-* (10c)² (Coon 2010).

(9) *Chol VSO-VOS alternation* (Coon 2010)

- a. Tyi i-kuch-u aj-Maria jiñi si'
PRF A3-carry-TR DET-M. DET wood
'Maria carried the wood.'
- b. Tyi i-kuch-u si' aj-Maria
PRF A3-carry-TR wood DET-M.
'Maria carried wood.'

(10) *Chol VOS objects lack DP* (Coon 2010)

- a. Tyi i-ch'il-i (***ili**) ja'as jiñi x-k'aläl
PRF A3-fry-TR (***this**) banana DET CL-girl
'The girl fried bananas.'
- b. Tyi i-k'ux-u (***jiñi**) waj aj-Maria
PRF A3-eat-TR (***DET**) tortilla DET-M.
'Maria ate the tortillas.'

² Proper names without *aj-* are possible in VOS object position, but Coon (2010) reports that examples like (10c) have a reading where the woman saw one Maria out of a group of women named Maria.

- c. Tyi i-k'el-e (*aj-)Maria jiñi x-'ixik
 PRF A3-look-TR (*CL-)M. DET CL-woman
 'The woman looked at Maria.'

Like Niuean, Chol permits adjectives (11a) in VOS object position, but unlike Niuean number marking (11a) and possessors (11b) are also permitted in Chol VOS objects (Coon 2010).

(11) *Possible NP objects in Chol VOS* (Coon 2010)

- a. Tyi i-tsañ-s-ä [cha'-kojty kolew wakax] k-papa
 PRF A3-die-CAUS-TR two-NC.4legs big cow A1-father
 'My father killed two big cows.'
- b. Tyi i-jats'-ä [iy-itjs-'iñ] jiñi alob
 PRF A3-hit-TR A3-younger.sibling DET boy
 'The boy hit his younger sibling.'

Conversely, VSO objects *must* contain DP-level material (Coon 2010).

Furthermore, Mark Baker (p.c.) reports that Sakha and Tamil, like Niuean, disallow pronouns, proper names, possessors, and demonstratives in PNI objects. However, the languages display variability with respect to number morphology. Plural objects can be pseudo noun incorporated in Tamil, but not Sakha. This cross-linguistic variability may be conditioned simply by language-specific constraints on the size of structurally reduced nominals. In Tamil, structurally reduced nominals may include #P, while in Niuean and Sakha #P can only be realized in full KPs. Alternatively, it may be that, in Sakha and Niuean, plural morphology must be fused, in the sense of Halle & Marantz (1993), with D^0 . If so, failure to realize D^0 may block the realization of #⁰. A third alternative would be to treat Tamil plural as the exponence of #⁰, but Sakha plural to be the exponence of D^0 that has agreed with #⁰, allowing for a unified treatment of PNI objects in both languages as DP-less arguments.³ Additional investigation is required to determine if these possibilities can be teased apart.

Chung & Ladusaw (2004) detail the syntax of nominals permitted in Chamorro PNI. Just as in Niuean, Sakha and Tamil, Chamorro PNI does not permit nominals with DP syntax. Chamorro PNI objects can be compound nouns, nouns modified by adjectives and relative clauses, and coordination structures. However, Chamorro PNI arguments cannot contain any elements unambiguously associated with the DP, including determiners, demonstratives, universal quantifiers, personal and interrogative pronouns, or possessors.

As noted in Chapter 2, DPs are also structurally reduced relative to KPs. KP constitutes a full nominal, bearing [*uCase*]. Bare DPs, like bare NPs, should not display case-marking, and should also be realized adjacent to the verb. Such constructions are indeed attested (Polinsky 2015). The Pama-Nyungan language Diyari (Australia) has a general detransitivizing suffix *-tadi* (Austin 1981). For now, I will remain agnostic to the nature of this suffix, but see Chapter 5 for more details. In a subclass of verbs (Austin's class 2C), both the subject and object of a verb bearing the suffix *-tadi* appear to be absolutive, with SOV word order.

³ I thank Mark Baker and Omer Preminger for suggesting these alternatives.

Note however that absolutive case has no overt morphology.

(12) *Diyari PNI* (Austin 1981)

- a. Nulu kaṇa-li nina ṇanti tayi-yi
DEM.ERG person-ERG DEM.ABS meat.ABS eat-PRS
'The man is eating this meat.'
- b. Nawu kaṇa nina ṇanti tayi-ṭadi-yi
DEM.ABS person.ABS DEM meat eat-TADI-PRS
'The man is having a feed of this meat.'

While the objects in (12a) and (12b) both appear absolutive, they are not. The object in (12a) can be separated from the verb and scrambled, the object in (12b) occupies a fixed position. Also, (12a) answers the question, *Who ate the meat?*, whereas (12b) answers, *What is the man doing?* (Austin 1981). The noun+verb unit in (12b) seems syntactically inseparable, yet does not form a lexical item. Such combinations are productive and semantically unrestricted beyond theta-role compatibility and verb class. Polinsky suggests that in (12b), the object is not absolutive, but a caseless PNI object, explaining its inability to move. Like Niuean and Tongan PNI, realization of a structurally reduced nominal yields a non-ergative alignment and requires that the object remain verb-adjacent. However, unlike the PNI languages discussed so far, Diyari PNI objects host DP-level material. If only NP objects could undergo PNI, we are left to explain the presence of the demonstrative on the object; demonstratives are impossible on PNI objects in all of the languages discussed above. Polinsky (2015) suggests the demonstrative may be adjectival (cf. Bittner & Hale 1995 on Warlpiri), but evidence is still needed to compel a different treatment of Diyari demonstratives from, for instance, those in Niuean which are not allowed in PNI constructions. An alternative that allows us to continue to treat demonstratives as being DP-level elements is to assume that Diyari instantiates PNI of DP objects.

The sample of PNI constructions in a number of languages above, then reveals that, despite some cross-linguistic variability in the nominal architecture allowed in PNI objects, all PNI objects are smaller than KP. A question that will remain unanswered in this dissertation is why there is a strong tendency for PNI objects to be radically structurally reduced. That is to say, why do most PNI objects not only lack KP, but also DP, disallowing unambiguous DP-level material like determiners, demonstratives, and pronouns. All things being equal, we might expect to find an equal number of languages with NP PNI objects as DP PNI objects. To my knowledge, this is not the case.

Additional confirmation of reduced nominal architecture of PNI objects comes from examining their interpretation. PNI objects that display the syntax of NPs, disallowing DP-level material, also display the semantics of NPs. These objects are interpreted as non-specific indefinites. They are existentially quantified, and take narrow scope with respect to all other operators (e.g. Bittner 1994, Van Geenhoven 1998, Massam 2001, Farkas & De Swart 2003, Chung & Ladusaw 2004, Dayal 2011). The change in interpretation that accompanies the presence/absence of case on the object is illustrated in Sakha (13).

(13) *Sakha PNI affects nominal interpretation* (Baker 2014)

- a. Masha **salamaat-y** türgennik sie-te
M.NOM **porridge**-ACC quickly eat-PST.3S
'Masha ate the porridge quickly.'
- b. Masha türgennik **salamaat** sie-te
M.NOM quickly **porridge** eat-PST.3S
'Masha ate porridge quickly.'

In the canonical transitive clause (13a), the direct object is marked with accusative case, and receives a specific interpretation. In the PNI counterpart (13b), the direct object no longer bears case and receives a non-specific interpretation. The effects of structural reduction on nominal interpretation are clearly illustrated through the interaction of such nominals with scope bearing elements. Tamil PNI objects take narrow scope with respect to negation (14a), repetitive adverbs (14b), and imperfective aspect (14c) (Baker 2014).

(14) *Tamil PNI objects are narrowest scope indefinites* (Baker 2014).

- a. Naan pustagam vanga-lle. (#Adu meese mele iru-kk-itu.)
I book buy-NEG. (it table on be-PRS-3NS
'I didn't buy (any) book.' (#It is on the table.) [$\exists > \neg$; $*\neg > \exists$]
- b. Naan tirumba tirumba pustagam vang-an-een
I again again book buy-PST-1SS
'I bought book(s) again and again.' (A different book each time.)
- c. Paale vari sim-aa avenge ponnu paa- t t-ange
a.lot year-ADV they girl see-PST-3PS
'For many years they have been seeing girl(s).' (Different ones different times.)

Massam (2001) and Chung & Ladusaw (2004) make similar observations for Niuean and Chamorro, respectively. The semantics of PNI objects thus confirms that the nominals are structurally reduced, lacking K^0 and case. Note that the existence of DP PNI objects in Diyari indicates the semantics of NP objects is not a direct outcome of the PNI construction, but is a matter of the precise size (i.e. how much smaller than a full KP) of the reduced complement to the verb.

PNI is, however, not limited to bare nominal heads, i.e. N^0 . This distinguishes the phenomenon from morphological Noun Incorporation (NI; Baker 1988 *et seq.*) which, crucially, involves the displacement of a nominal head.⁴ Nominals larger than N^0 can undergo PNI. For example, in Niuean, NPs containing adjectives (15a), comitative PPs (15b), and subjunctive relative clauses (15c)⁵ can be pseudo noun incorporated:⁶

⁴ This claim concerning morphological Noun Incorporation has not gone unchallenged. For arguments against the view that NI can only apply to N^0 see Barrie & Mathieu (2014).

⁵ The details concerning relative clauses in PNI are somewhat nuanced. Example (7a) demonstrates that indicative relative clauses are ungrammatical, however (15c) demonstrates that subjunctive relative clauses are permitted with PNI objects. I follow Massam in assuming that the locus of the two types of relative clauses are distinct. See Cinque (2010) for a recent suggestion along these lines. Indicative relatives are generated higher in the nominal domain than subjunctive ones. Only the lower position of subjunctive relative clauses is available when a structurally diminished nominal is merged.

- (15) *PNIed nominals are larger than N⁰* (Massam 2001).
- a. Ne holoholo **kapiniu kiva** fakaeneene a Sione
 PST wash **dish dirty** carefully ABS S.
 ‘Sione washed dirty dishes carefully.’
 - b. Ne kai **sipi mo e ika mitaki** a Sione
 PST eat **chip COM ABS fish good** ABS S.
 ‘Sione ate good fish and chips.’
 - c. ... Ke kumi tagata **ke ta mai mo nonofo** e motu
 SBJ seek people **SBJ bring for settle** ABS island
 ‘... He sought people to bring to settle the island.’

These elements are generated low enough in the extended nominal projection to be able to surface when the nominal is reduced. Other examples of well-formed phrasal PNI objects can be found above.

The data presented above indicates that PNI objects are phrasal nominal compliments that are uniformly smaller than KP, displaying some degree of cross-linguistic variability in the exact amount of nominal architecture that they may host. As they are smaller than KP, PNI objects should be ruled out entirely by the proposed Case Filter, unless they are able to obviate it. Nominals must be KPs, and PNI objects are not. I posit below that the distributional restrictions enforced on well-formed PNI objects arise precisely because only in those licit positions can the proposed Case Filter be obviated.

3.2 The distribution of PNI objects

In addition to reduced nominal size, PNI objects can be distinguished from canonical transitive objects by their distribution. I discussed some of these distributional differences above, but examine them more fully here. These differences, I contend, arise because PNI objects, unlike canonical transitive objects, are smaller than KP, and can only obviate the proposed Case Filter in certain configurations.

⁶This observation was the crucial point for Massam (2001), who argued that an NI account of the Niuean data (e.g. Seiter 1980, Baker 1988) was inappropriate. The appearance of full NPs in the incorporation position is unexpected under Baker’s (1988) account, because NI was held to only apply to nominal heads which underwent Head Movement into the verb. If such an account were correct for Niuean, nominal modifiers would not be realized along with the incorporated nominal, but should be stranded as they are in morphological incorporation languages (i), contrary to fact.

- (i) *True noun incorporation strands modifiers* (Baker 1988).
- a. *Southern Tiwa*
Wisi bi-seuan-mū-ban
two 1S:B-man-see-PST
 ‘I saw two men.’
 - b. *Greenlandic*
Kusanartu-mik sapangar-si-voq
beautiful-OBL bead-get-3SS
 ‘He bought a beautiful bead.’

As noted above, in transitive, non-PNI environments in Niuean (and Chol), the clause displays VSO word order. In PNI clauses, the word order is VOS. The data is repeated below (16).

(16) *Niuean PNI* (Seiter 1980)

- a. Takafaga tūmau nī e ia e **tau ika**
 hunt always EMPH ERG he ABS PL **fish**
 ‘He is always hunting fish.’
- b. Takafaga **ika** tūmau nī a ia
 hunt **fish** always EMPH ABS he
 ‘He is always hunting fish.’

This correlation between the presence/absence of case-marking on direct objects and a distinct surface position for those direct objects is also attested in the Sakha and Tamil examples, repeated below (17-18).

(17) *Sakha PNI* (Baker 2014)

- a. Masha **salamaat-*(y)** tūrgennik sie-te
 M.NOM **porridge-*(ACC)** quickly eat-PST.3S
 ‘Masha ate the porridge quickly.’
- b. Masha tūrgennik **salamaat-(#y)** sie-te
 M.NOM quickly **porridge** eat-PST.3S
 ‘Masha ate porridge quickly.’

(18) *Tamil PNI* (Baker 2014)

- a. Maala **anda pustagatt-e / *pustagam** veegamaa padi-cc-aa
 M.NOM **the book-ACC / *book.NOM** quickly read-PST-3.F.S
 ‘Mala read the book quickly.’
- b. Maala veegamaa **pustagatt-e / pustagam** padi-cc-aa
 M.NOM quickly **book-ACC / book.NOM** read-PST-3.F.S
 ‘Mala read the book quickly.’

In all cases seen above, the case-marked object of canonical transitives is able to be realized in a higher structural position than the corresponding PNI object, at some point in the derivation. This is immediately clear in examples (17) and (18). When marked with accusative case, the direct object *can* appear to the left of manner adverbs, whereas PNI objects *must* appear to the right of manner adverbs. The Niuean data (16) are complicated by the independent operation of VP-fronting which places the PNI object in a structurally high position by virtue of the entire VP moving high in the clause. However prior to VP-fronting, the case-marked object evacuates the VP (Massam 2001). At that point in the derivation, it is the case-marked object that occupies the higher structural position.

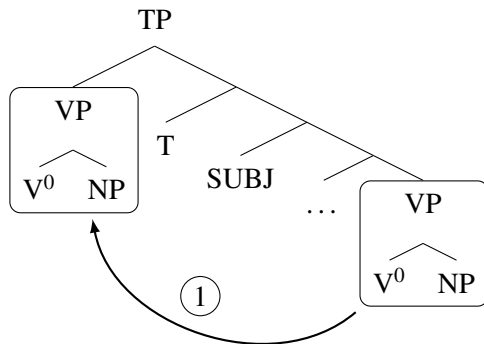
If the manner adverbs in (17-18) mark the edge of VP, then we can see that in each scenario, a case-marked object in canonical, non-PNI, transitives can occupy a higher structural position than the corresponding PNI object. However, in some instances, case-marked objects need not move, and can appear in

the same position as PNI objects. This is certainly the case in Tamil (18b) and may be the case in Sakha (17b), depending on the proper analysis of the semantic bizarreness of such a realization.

Massam (2001) provides an account of the correlation found between reduced nominal architecture and structural position displayed by the objects of PNI constructions in Niuean. The account is elegant in its simplicity, and the general logic of her account has been adopted by many subsequent approaches to PNI in other languages. However, I will argue that it is incapable of capturing the distribution of PNI objects cross-linguistically. She proposes that PNI arises as a consequence of the size of the nominal complement. Niuean, and other PNI languages, permits both KP and smaller-than-KP objects. Presumably, the language can choose to merge either type of nominal freely as complement to the verb. Language specific constraints set the size of the PNI object, capturing cross-linguistic variability in PNI object size discussed above. In canonical transitives, the predicate takes a KP complement. In PNI, the transitive predicate takes a smaller-than-KP complement. As a consequence of the nominal's smaller-than-KP status, it does not take part in [*uCase*]-valuation and is realized without any case morphology. Furthermore, the complement's reduced size ensures that it does not undergo the same movement operations that KPs do.

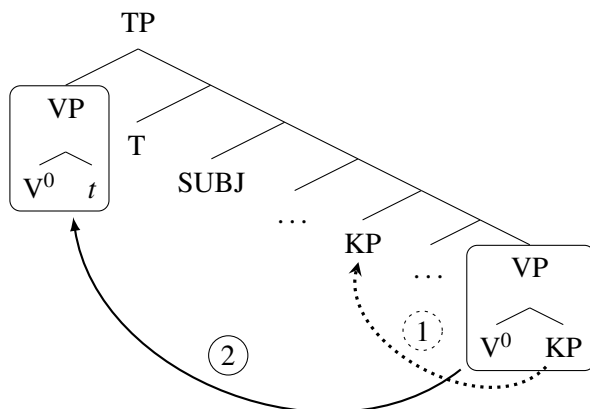
In Niuean (and Chol), when the independent property of VP-fronting takes place, the NP-complement moves along with the verb, yielding VOS word order, schematized in (19).

(19) *Deriving Niuean VOS word order*



KP-complements (DP-complements in Massam's terms) permit functional elements like determiners, possessors and relative clauses, and, on Massam's analysis, undergo movement to a VP-external position, appearing to the left of VP-internal material in languages like Sakha and Tamil, and not fronting along with the VP to clause-initial position in Niuean (and Chol), as in (20).

(20) *Deriving Niuean VSO word order*



On this view, the adjacency requirement of PNI objects is attributed to the ‘inertness’ of smaller-than-KP complements. The structurally reduced complement is generated as the immediate complement of the verb. As complement to the verb, the NP is adjacent to it, and, given its structural size, it cannot vacate this verb-adjacent position.

One aspect of analyses of this sort that does differ from account to account is what triggers the movement of KP complements. In Massam’s original analysis, [*uCase*] is responsible for the distribution of nominals. KP objects must move to value [*uCase*] in a Spec-Head relationship with a dedicated Case projection.⁷ PNI objects are able to survive the derivation *in situ* because [*uCase*]-valuation is only a requirement of KPs. [*uCase*] must be valued, but, because they are smaller than KP, PNI objects lack [*uCase*] and thus need not, and furthermore cannot, undergo operations that result in feature valuation. However, there is something of a conspiracy built into the analysis: all and only those nominals that *can* move do, and all and only those nominals that *cannot* move do not. It clear why PNI objects do not *have to* move, but it is not clear why PNI objects *cannot* move. Furthermore, such an analysis faces difficulty in being extended to languages like Tamil in which the distribution of KP and smaller-than-KP objects are not mutually exclusive. Recall that in Tamil KP objects can appear VP-internally just like PNI objects. Furthermore, as discussed briefly in Chapter 2, it is now commonly held that nominals do not need to move to value [*uCase*].

An alternative to Massam’s analysis may be to suggest that the hypothesized movement of KPs out of the VP is still attributable to the size of the nominal, but not its need for Case. Movement out of the VP, as schematized in (20), may be triggered by *object shift*. This position is taken by Coon (2010). In the Germanic languages, object shift targets definite/specific objects (Holmberg, 1986). In Niuean movement of the object appears to *not* be triggered by definiteness, but by the presence of DP-level material. Coon (2010) offers a number of arguments that this is clearly the case in Chol. It is this position that I will assume in my analysis of the behavior of PNI objects. In languages like Niuean and Chol, KPs obligatorily undergo object shift

⁷ The object moves to Spec-AbsP and the subject moves the Spec-ErgP. ErgP only ever enters the derivation when two arguments are in need of licensing, encoding the ergative-absolutive alignment. However, AbsP is always present and must discharge its [Case] to some element in the clause.

to a VP-external position, capturing the observation that KP arguments must appear in VSO constructions, while smaller-than-KP arguments must appear in VOS constructions. However, in Sakha and Tamil, object shift is optional, ensuring that accusative-marked objects in Tamil (and possibly Sakha) can be realized to the right of manner adverbs, if they did not vacate the VP. In all languages, smaller-than-KP complements cannot undergo object shift, encoding their inability to appear in VP-external positions.

While an inertness-based account of PNI is appealing in its simplicity, it can be shown that such an analysis is not sufficient to capture the behavior of PNI objects cross-linguistically. The proposal falls short in two regards. First, the attested distribution of bare NPs in PNI constructions is more highly constrained than an inert NP analysis predicts. Secondly, the adjacency requirement between the bare NP and the verb can be shown to hold not only of the entire NP, but of the N^0 head. Below, I introduce the head-head adjacency requirement of PNI objects. The existence of this requirement, in the absence of KP, suggests that KP-presence is crucial for determining well-formed syntactic derivations, and that the proposed Case Filter is real. Nominals that do not satisfy the proposed Case Filter by hosting K^0 obviate it under a head-head adjacency relationship.

3.2.1 Derived adjacency

Baker (2014) shows that just as bare NPs base-generated as complements to the verb must demonstrate adjacency in PNI constructions, *so too must bare NPs that are not complements to the verb*. Such adjacency must be derived by moving intervening elements out of the way. Sakha and Tamil resultative clauses display this derived adjacency requirement. Examples of Sakha (21) and Tamil (22) prepositional and adjectival resultative phrases are given below.

(21) *Sakha resultatives* (Baker 2014).

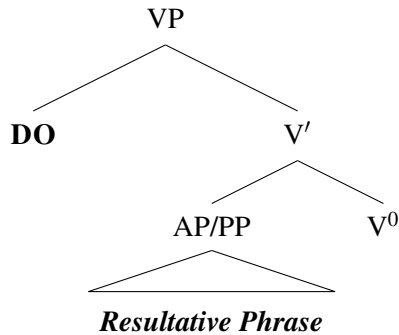
- a. Misha kumaaqy-ny **xoruopka-qa** uk-ta
M.NOM paper-ACC **case-DAT** put-PST.3SS
'Misha put paper in the case.'
- b. Bu oqo-lor-u **djolloox** oŋor-but-a
this.NOM child-PL-ACC **happy** make-PTPL-3SS
'This made (the) children happy.'

(22) *Tamil resultatives* (Baker 2014).

- a. Baala pustagatt-e **meese kiile** va-kkir-aan
B.NOM book-ACC **table under** put-PRS-3MS
'Bala puts the book under the table.'
- b. Adu paviolationatt-e **peris-aa** aakkar-idu
it fruit-ACC **big-ADV** make.PRS-3NS
'It makes (the) fruit big.'

Following Larson (1988), Baker (2014) adopts the following structure for resultatives and direct objects within the VP (23).

(23) *Modelling resultative phrases*



Resultative phrases are generated as complement to the verb. The direct object is generated as a VP specifier.

Under Massam’s (2001) inert NP analysis, the direct object in a transitive clause containing an adjectival or prepositional resultative should be able to surface as a bare NP, just as they do in the absence of resultatives, as discussed in Section 1. Such a nominal will not be eligible for subsequent movement operations due to its diminished structure, but it should nevertheless be well-formed *in situ*. This prediction is incorrect.

(24) *In situ intervention blocks PNI* (Baker 2014).

a. *Sakha*

- (i) *Misha (serenen) **kumaaqy** xoruopka-qa uk-ta
M.NOM (carefully) **paper** case-DAT put-PST.3SS
‘Misha put a paper/papers in the case (carefully).’
- (ii) *Bu **oqo** djolloox oꞗor-or
this **child** happy make-AOR.3SS
‘This makes a child/children happy.’

b. *Tamil*

- (i) *Baala **pustagam** meese kii|e va-kkir-aan
B.NOM **book** table under put-PRS-3MS
‘Bala puts book(s) under the table.’
- (ii) *Adu **paꞑam** peris-aa aakkar-itu
it **fruit** big-ADV make.PRS-3NS
‘It makes fruit big.’

Given the ungrammaticality of bare NPs in (24), the inert NP analysis of PNI appears insufficient to capture the distribution of PNI object. It is not enough to say that languages like Sakha and Tamil can generate either NP or KP objects and that NP objects are well-formed so long as they remain *in situ*. The PNI objects in (24) remain *in situ*, but are ungrammatical, nevertheless.

Of course, it is possible that the proposed structure in (23) is incorrect. However, additional evidence confirms the proposed structure in (24). First observe that APs cannot be realized anywhere but immediately before the verb.

(25) *Adjectival resultatives must be verb-adjacent* (Baker 2014).

- a. *Bu djolloox Masha-ny oŋor-or
 this happy M.-ACC make-AOR.3SS
 ‘This made Masha happy.’
- b. *Adu peris-aa paviolationatt-e aakkar-idu
 it big-ADV fruit-ACC make.PRS-3NS
 ‘It makes fruit big.’

This requirement is most naturally accounted for if adjectival resultatives are generated in Compl-V⁰, and cannot undergo syntactic operations that move the AP away from its immediately pre-verbal base-position. Unlike adjectival resultatives, prepositional resultatives can move from a verb-adjacent position (26).

(26) *Prepositional resultatives can move* (Baker 2014).

- Misha serenən **xoruopka-qa** kumaaqy-ny uk-ta
 M.NOM carefully **case-DAT** paper-ACC put-PST.3SS
 ‘Misha carefully put *the paper* in the case.’

However, Baker (2014) observes that (26) is more marked, carrying focus on the direct object as indicated in the translation. This suggests that the DO-PP word order reveals the underlying structure.

Baker & Vinokurova (2010) provide a second argument in favor of the view that the prepositional resultative is base-generated as complement to the verb despite its ability to vacate verb-adjacent position. They observe that in reduced relative clauses containing passived ditransitives with a relativized indirect object, ϕ -agreement with the direct object is possible on the head noun (the indirect object) of the relative clause. However, this is only possible in some ditransitives. Consider the dichotomy in (27):

(27) *Agreement indicates prepositional resultatives are low* (Baker & Vinokurova 2010).

- a. *Suruk* uur-ullu-but ostuol-a
 letter put-PAS-PTPL table-3SP
 ‘The table that the letter was put on.’
- b. **Suruk* yyt-ylly-byt kihi-te
 letter send-PAS-PTPL person-3SP
 ‘The person that the letter was sent to.’

Baker & Vinokurova (2010) contend that the agreement possibilities are distinct in (27) because the base-position of the inanimate goal *ostuola* ‘table’ is distinct from that of the animate goal *kihite* ‘person’. The former is generated in a prepositional resultative *below* the base-position of the direct object, while the latter is generated *above* the direct object (possibly in Spec-VP or Spec-AppIP). As such, only the animate goal

acts as an intervener, rendering agreement with the direct object ungrammatical (27b). No such intervention arises in the prepositional resultative case (27a). Similar structural alternations are attested in English (e.g. Marantz 1993), German and Icelandic (McFadden 2004), Japanese (Miyagawa & Tsujioka 2004), and Czech (Dvořák 2010).⁸ The set of possible PNI arguments in Niuean, detailed in Chapter 4, will further motivate treating (at least some) inanimate goals as being generated within the VP.

Crucially, the ability of prepositional resultatives to move, as illustrated in (27), demonstrates that PNI objects can be generated alongside resultative phrases. The ungrammaticality of the prepositional resultative examples in (25ai) and (25bi) can be ameliorated by moving the intervening PP out of the way.

(28) *Derived adjacency* (Baker 2014).

a. *Sakha*

Misha serenen **xoruopka-qa** *kumaaqy uk-ta*
 M.NOM carefully **case-DAT** *paper put.PST.3SS*
 ‘Misha carefully put a paper/papers in the case.’

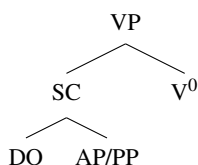
b. *Tamil*

Baala **petti ulle** *paviolationam va-kkir-avan*
 B.NOM **box in** *fruit put-PRS-PTPL-3SS*
 ‘Bala is the one who puts fruit(s) in (the) box(es).’

The dichotomy illustrated in (25) and (28) demonstrates that the distribution of PNI objects, in these constructions, cannot be reduced to a condition on the base-position of NPs. Bare NPs can occur as internal arguments in both simple transitives and transitives containing prepositional resultatives, but, regardless of base-position, PNI objects *must appear surface adjacent to the verb*. This condition may be vacuously satisfied if the base-position of the PNI object is already adjacent to the verb, as is the case in canonical transitives. This condition can also be satisfied by creating adjacency by means of removing potential interveners. Crucially, traces do not factor into this adjacency computation. This condition is not captured by

⁸ A common alternative in the literature has been to model resultatives as small clauses (e.g. Stowell 1981, 1983; Hoekstra 1988; Den Dikken 1995; Pesetsky 1995; Harley 2002; Kratzer 2004). On this view, the direct object is generated as the specifier of a small clause complement to the verb as in (i):

(i) *Modelling resultatives as small clauses*



On this model of resultatives too, NP objects *not* generated as direct complements to the verb behave just as those that are. If the resultative phrase linearly intervenes between the direct object, in its base-position, and verb, the direct object cannot be realized without overt case morphology, but can be if the intervening element is moved out of the way, yielding adjacency between the object and the verb. It will become relevant in Chapter 4 to adopt the model in (24), at least for the prepositional resultatives. See Bruening (2010, 2014) for arguments against a small clause analysis of prepositional dative ditransitives, including the verb *put*.

Massam’s (2001) proposal. However, it can be captured if the distribution of PNI objects is (at least in part) governed by the proposed Case Filter, in conjunction with an alternative licensing strategy which requires head-head adjacency to obtain.

Derived adjacency illustrates the most striking feature of head-head adjacency between PNI objects and the verb. Elements that are hierarchically lower than the two heads which must be adjacent trigger ungrammaticality if they intervene between the argument and the verb. The resultative phrase, generated lower in the clause than the PNI object (24), intervenes. Linear order, not hierarchical order, is relevant in determining the licit positions of PNI objects, suggesting that head-head adjacency can only be evaluated after linear order is established. The hallmark of syntactic operations is their sensitivity to hierarchical order, rather than linear order. This sensitivity to linear order is atypical for syntactic operations, and more typical of morphological operations (Chomsky 1973 *et seq.*).

However, even this surface adjacency condition, motivated by the interaction of PNI and resultatives above, is too weak to capture the behavior of bare, PNI objects. They additionally display NP-internal word order effects that reveal that the adjacency requirement holds of the nominal head and the verb, not simply the entire structurally reduced, smaller-than-KP complement.

3.2.2 N⁰ adjacency

Conditions on the internal structure of PNI objects also signal that the common analysis of the distribution of these structurally reduced arguments is incorrect.

The common analysis of the distribution of PNI objects predicts that the internal make up of the nominal should be irrelevant for its well-formedness. Any element generated within the PNI object’s diminished structure should be able to appear in any position consistent with the phrase structure of the language. Contrary to this prediction, PNI constrains NP-internal word order. *The nominal head must be immediately adjacent to the verbal head* (Baker 2014). Phrase structures that do not permit this head-head adjacency relationship are ungrammatical.

PNI in Tongan places constraints on the order of NP-internal elements, where such elements are otherwise less constrained in their distribution (Ball 2004).⁹ Tongan employs a small number of adjectives that can appear before or after the noun they modify, as in (29).¹⁰

(29) *Tongan NP-internal word order variation* (Ball 2004).

- a. Na’e tō ‘e Sione ‘ene **ki’i** manioke
PST plant ERG S. his **small** cassava
‘Sione planted his small amount of cassava.’
- b. Na’e tō ‘e Sione ‘ene manioke **ki’i**
PST plant ERG S. his cassava **small**
‘Sione planted his small amount of cassava.’

⁹ I thank Diane Massam for bringing Ball’s work to my attention.

¹⁰ Niuean lacks such variability in the placement of adjectives, requiring rigid noun-adjective order.

In PNI constructions, NP-internal word order variability is constrained as to ensure that the head of the PNI object is immediately adjacent to the verb. Prenominal adjectives are disallowed (30).

(30) *Tongan PNI disallows pre-nominal modifiers* (Ball 2004).

- a. Na'e tō manioke **ki'i** 'a Sione
 PST *plant cassava* **small** ABS S.
 'Sione planted a small amount of cassava.'
- b. *Na'e tō **ki'i** manioke 'a Sione
 PST *plant* **small** *cassava* ABS S.
 'Sione planted a small amount of cassava.'

In Tongan PNI environments, head-head adjacency must hold between the verb and the PNI object. However, one may imagine an alternative analysis of the Tongan data (and the Chamorro data to be presented below). It may be the case that the illicit modifier-noun word orders are ill-formed not because the modifiers interrupt head-head adjacency, but because pre-nominal modifiers occupy a position high in the nominal domain. If PNI can only occur when a structurally diminished nominal is merged, these facts can be independently ruled out. On this view, modifier-noun orders would be ungrammatical in PNI, because the structure necessary to achieve such orders are ungrammatical in PNI.¹¹ I will present evidence against this alternative below.

A similar head-head adjacency requirement is attested in Chamorro, restricting nominal-internal word order possibilities (Chung & Ladusaw 2004). Chamorro displays freedom with respect to the placement of modifiers within the nominal. Certain modifiers can be realized either before the nominal head or after it (31). Variable NP-internal word order is not permitted in Chamorro PNI (32).

(31) *Chamorro NP-internal word order variation* (Chung & Ladusaw 2004).

- a. Ädyu i [yã-hu] na lepblu
 that the [WH.OBJ.like-AGR] LNK
 'that book which I like.'
- b. Ädyu i lepblu [ni yã-hu]
 that the book [c WH.OBJ.like-AGR]
 'that book which I like'

(32) *Chamorro PNI disallows pre-nominal modifiers* (Chung & Ladusaw 2004).

- a. Si Juan gäi-[kareta agäga]
 CS J. AGR.have-[car red]
 'Juan owns a red car.'
- b. *Gäi-[agäga na kareta] yu'
 AGR.have-[red LNK car] I
 'I own a red car.'

¹¹ I thank Diane Massam, Julie Legate, and Omer Preminger for independently suggesting this alternative.

Unlike (31), in (32) only the form in which the head noun appears to the left of the modifier, and thereby verb-adjacent, is acceptable.

The facts from Chamorro and Tongan illustrate that bare NP-verb adjacency is a necessary but not sufficient condition in forming licit PNI constructions. The nominal head itself must be adjacent to the verb. This requirement is not predicted under an inert NP analysis of PNI. So long as the PNI object remains *in situ*, it is predicted to be well-formed, contrary to fact.

In some other languages with PNI, the effects of this contrast cannot be felt, because there is less variability in NP-internal word order. The only available word order vacuously satisfies the head-adjacency requirement. For instance, Niuean NPs display strict noun-adjective NP-internal word order. This requirement along with verb-initial clause structure ensures that all cases of PNI that are otherwise well-formed will satisfy head-adjacency (33a). Sakha (33b) (and Tamil) similarly satisfies the head-adjacency condition on PNI vacuously, because it displays rigid adjective-noun NP-internal word order and is verb-final.

(33) *Niuean and Sakha vacuously satisfy head-adjacency.*

- a. Ne *holoholo kapiniu* **kiva** fakaneene a Sione
 PST wash dish **dirty** carefully ABS S.
 ‘Sione washed dirty dishes carefully.’
- b. Min **saharxaj** *sibekki ürgee-ti-m*
 I.NOM **yellow** flower pick-PST-1SS
 ‘I picked (a) yellow flower(s).’

3.2.3 The role of K^0

The data in this section demonstrate that an inertness-based analysis of PNI is too weak, whatever the cause of inertness may be, e.g. because the nominal has no need for Case or because the nominal cannot undergo object shift. Analyses of this kind overgenerate. They predict that NPs base-generated in positions not immediately adjacent to the verb should be well-formed as long as they remain *in situ*, and that languages which display variable NP-internal word orders should be able to display such variability in both PNI and non-PNI environments.

Considering a fuller set of data concerning the distribution of PNI objects, common accounts of the phenomenon are shown to be insufficient. Syntax-internal considerations like [*u*Case]-valuation and object shift-driven movement, as well as semantic considerations like definiteness/specificity driven movement (e.g. Diesing 1992) are incapable of capturing the head-head adjacency requirement of PNI objects. Instead, I posit that the observation that nominals in PNI constructions display strict head-head adjacency with the verb suggests that K^0 plays a role in nominal distribution. In the absence of K^0 , head-head adjacency serves to obviate the proposed Case Filter. Whenever head-head adjacency is not maintained, a violation of the proposed Case Filter is incurred and ungrammaticality arises.

Before concluding this section, I briefly consider another account of the distribution of PNI objects.

Clemens (2014) argues that the distributional properties of PNI objects in Niuean arise due to prosodically conditioned re-ordering of arguments. In Niuean, she suggests, only the verb moves to clause initial position in the syntax. There is no VP-fronting. The NP complement is realized in verb-adjacent position post-syntactically. Structurally reduced nominals come to be pronounced immediately adjacent to the verb, because they are generated as sisters to the verb, and, all things being equal, elements generated as sisters, and related by selection should be pronounced together (cf. Richards 2014). What allows structurally reduced nominals to be reordered while full KPs cannot be is attributed to the phasal status of KPs. The KP phase is spelled out earlier than its V^0 sister and as such cannot be subject to prosodic re-ordering which can only operate on elements within the same phase. Like Massam's original proposal, this alternative faces difficulties when we attempt to extend it to the data discussed in this section.

Clemens' (2014) prosodic re-ordering account falls short in accounting for the facts from Tongan and Chamorro. Her account predicts that prosodic re-ordering should be insensitive to the word order of NP-internal material. Contrary to this prediction, PNI requires strict surface adjacency between the verb and nominal head, obeying verb-noun adjacency rather than mere verb-NP adjacency. Capturing word internal effects would require prosodic re-ordering to place the head of the PNI object next to the verb. This stronger form of re-ordering is in line with Richards' (2014) proposal about prosodic grouping, but even this stronger view faces problems in regard to the derived adjacency data.

Recall the data from Sakha and Tamil resultatives and how they interact with PNI objects. PNI objects are only well-formed when the resultative is not realized in verb-adjacent position, allowing the PNI object to be adjacent to the verb instead. Prosodic re-ordering can capture well-formed instances of derived adjacency. Because the verb selects the direct object and the direct object is contained within the same phase as the verb, they will be re-ordered to be linearly adjacent. However, prosodic re-ordering overgenerates well-formed structures. It predicts, contrary to fact, that adjectival resultatives should also participate in derived adjacency. That is to say, smaller-than-KP objects which are ungrammatical in the canonical word order where they appear to the left of adjectival resultatives, (22b) and (23b), should be well-formed if the smaller-than-KP object is re-ordered to appear to the right of adjectival resultatives and adjacent to the verb. This pattern is not attested. Adjectival resultatives cannot be realized anywhere but adjacent to the verb, regardless of the form of the direct object (26). An extra constraint must be added so that adjectival resultative phrases block derived adjacency. This stipulation adds a redundancy to the system, because we must independently rule out movement of adjectival resultatives when the direct object is a full KP.

Thus, in addition to [u Case]-valuation, object shift-driven movement, and definiteness/specificity driven movement (e.g. Diesing 1992), morphophonological considerations like prosodic re-ordering appear incapable of capturing the head-head adjacency requirement of PNI objects. I will explore the exact nature of this adjacency, and how it can obviate the proposed Case Filter in Chapter 4. Before offering an analysis of the head-head adjacency requirement. I turn to the behavior of *in situ* subjects in Balinese and Malagasy, in Section 3.3. Balinese and Malagasy *in situ* subjects share a common property with PNI objects; *in situ subjects must display linear head-head adjacency with the verb*. The data from these languages will help to

disambiguate competing approaches to the proper modeling of head-head adjacency.

3.3 Head-head adjacency in Austronesian *in situ* subjects

In this section, I show that *in situ* subjects in some Austronesian languages, specifically Balinese and Malagasy, also display a head-head adjacency requirement with the verb just like PNI objects. Taken together, data from these phenomena will be utilized to motivate a particular account of the head-head adjacency requirement in Chapter 4. The nominals in Balinese and Malagasy that display head-head adjacency are DPs like the PNI objects in Diyari. This confirms that it is the non-KP status of the arguments in question, regardless of their specific size, that is relevant, indicating that K^0 , or its absence, is responsible for the distribution of nominals.

3.3.1 Austronesian Voice and its ramifications for case

As discussed in Chapter 2, many Western Austronesian languages display what has been called a *Voice system*. Recall that Voice systems are characterized by the fact that a single argument of the clause – possibly a non-core argument – is privileged in certain ways. This argument may be in a certain linear position and/or receive a particular morphological marking, and dedicated morphology on the verb indicates which argument was chosen for this special status. Furthermore, \bar{A} -operations are often limited to this argument. Since at least Guilfoyle et al. (1992), the common analysis of nominal distribution in such constructions has been to posit that, in the simplest cases, only the Pivot undergoes movement. All other nominals remain in their base-positions.

Most important to our current purposes is the observation that case and Voice are intimately intertwined. Note that, in Squaliq Atayal, the subject in Non-Subject Voices (34b-d) is preceded by the case maker *na*, which is also used for nominal possessors. Subjects in Pivot position, like all other Pivot arguments, are marked with *qu'* (34a).

(34) *Voice alternation in Squaliq Atayal* (Liu 2004)

- a. M-aniq qulih **qu'** Tali'.
SV-eat fish QU Tali
'Tali eats fish.'
- b. Niq-un **na'** Tali' qu' qulih qasa.
eat-OV CS Tali QU fish that
'Tali ate the fish.'
- c. Niq-an **na'** Tali' qulih qu' ngasal qasa.
eat-LV CS Tali fish QU house that
'Tali eats fish in that house.'
- d. S-qaniq **na'** Tali' qulih qu' qway.
IV-eat CS Tali fish QU chopsticks
'Tali eats fish with chopsticks.'

Similar observations can be found in other Voice-system languages. In Tagalog, a subject is marked with *ang* in Subject Voice, but *ng* in Non-Subject Voices (35). Subject and Object Voice are used to illustrate the alternation, but all other Non-Subject Voices behave identically. The non-Pivot subject is marked with *ng*.

(35) **Tagalog Voice and case alternations** (Rackowski & Richards 2005).

- a. B<um>ili **ang** bata ng tela sa palengke para sa nanay
buy<SV> ANG child CS cloth DAT market for DAT mother
'The child bought cloth at the market for mother.'
- b. B-in-ili-Ø **ng** bata ang tela sa palengke para sa nanay
-ASP-buy-OV CS child ANG cloth DAT market for DAT mother
'The child bought *the cloth* at the market for mother.'

Case alternations of this kind are visible even in some non-Austronesian languages which display a Austrone- sian-type Voice system. In the Nilotic language Dinka (South Sudan), the case marking on subjects alternates with Voice. In Subject Voice, the clause-initial subject occurs in the unmarked case (36a), but in Object Voice (or Oblique Voice), subjects appear in the genitive case (36b).¹²

(36) **Dinka Voice and case alternations** (Van Urk 2015):

- a. **Áyén** à-càm cuñ nẹ pàal.
Ayen 3S-eat.SV food P knife
'Ayen is eating the food with a knife.'
- b. Cuñ à-céem **Áyèn** nẹ pàal.
food 3S-eat.OV Ayen.GEN P knife
'The food, Ayen is eating with a knife.'

In other Austronesian languages, however, the behavior of *in situ* subjects is more reminiscent of the transitive/PNI dichotomy discussed above. In Balinese and Malagasy, *in situ* subjects behave not as if they have been alternatively case-marked, but rather as if they have not been case-marked at all. Just as in PNI environments, these *in situ* subjects display strict head-head adjacency, suggesting they lack K⁰ altogether.

3.3.2 Balinese head-head adjacency

Balinese non-Pivot subjects display strict surface linear adjacency between the head of the subject and the verb identical to the adjacency requirement of PNI objects discussed in Section 3.2.

Balinese,¹³ as well as other Malay/Indonesian languages, has three Voices - Subject Voice, Object Voice, and an Indo-European-style passive voice (e.g. Artawa 1998, Wechsler & Arka 1998, Arka 2004). We will only be concerned with the active Voices here.¹⁴ In general, the choice between Voices is conditioned by

¹² Case in Dinka is marked by tonal alternations (Andersen 2002).

¹³ Unless otherwise noted, data from Balinese is taken from my fieldwork notes.

¹⁴ The Balinese passive takes two forms, conditioned by speech register. In the high register passive, the verb bears the prefix *ka-*. The subject appears in an optional *by*-phrase, headed by *antuk* or *teken* (ia). The low register passive is marked by the suffix *-(n)a*.

discourse-informational structure associated with the two transitive arguments (Arka 2004).

In the Balinese Subject Voice, the verb is marked by a nasal prefix *N-*, whose form is phonologically conditioned by the initial segment of the verbal stem. The subject appears as Pivot typically in preverbal position and to the left of any auxiliaries (though word order is fairly free). The direct object follows the verb (37a). Omission of the Subject Voice prefix (37b), or reversing the position of the arguments (37c), yields ungrammaticality on the intended reading.¹⁵

(37) ***Balinese Subject Voice***

- a. Tiang laku numbas bawi-ne punika
I will SV.buy pig-DEF that
- b. *Tiang laku tumbas bawi-ne punika
I will OV.buy pig-DEF that
- c. *Bawi-ne punika laku numbas tiang
pig-DEF that will SV.buy I
'I will buy the pig.'

Note that Balinese permits SV verbs to co-occur with definite objects (in the sense of Milsark 1977) (37a). Other Austronesian languages, like Tagalog (e.g. Rackowski 2002), usually disallow such co-occurrence, requiring OV morphology and promotion of the object to Pivot whenever it carries a definite interpretation. Exceptions to this generalization are attested when an argument other than the object is to undergo subsequent \bar{A} -operations, forcing the definite object to remain low.

In the Object Voice, the verb is bare. In canonical word order, the internal argument is in clause-initial position to the left of any auxiliaries. The external argument follows the verb (38a). The use of the Subject Voice prefix or reversing the position of the arguments yields ungrammaticality on the intended reading.

The optional *by*-phrase is marked by *teken*.

(i) ***Balinese passive constructions*** (Arka 2004)

- a. *High passive:*
buku-ne ka-ambil (antuk/teken I Guru)
book-DEF PAS-take (by ART teacher)
'The book has been taken (by the teacher).'
- b. *Low passive:*
buku-ne jemak-a (teken Wayan)
book-DEF take-PAS (by W.)
'The book has been taken by Wayan.'

Unlike active Voices in which the subject can bind a reflexive object regardless of which argument is promoted to Pivot, the demoted subject of the passive cannot bind the thematic object (Wechsler & Arka 1998).

¹⁵ The ungrammatical strings, in (38b-c), are well formed on the reading "The pig will buy me."

(38) **Balinese Object Voice**

- a. Anak cerik lakar ejuk polisi
person small will OV.arrest police
- b. *Anak cerik lakar ng-ejuk polisi
person small will SV-arrest police
- c. *Polisi lakar ejuk anak cerik
person small will OV.buy N.
'The police will arrest a child.'

As (38) indicates, Balinese also permits indefinite Pivots. This behavior is unlike Tagalog (e.g. Richards 2000, Rackowski 2002) and Malagasy (e.g. Pearson 2001, 2005) which require that the Pivot be definite/specific. Following Guilfoyle et al. (1992), the word orders can be captured if the post-verbal arguments remain *in situ*, and the Pivot raises outside the *vP*. The verb must also move to the head of a projection above *vP*, which hosts the *in situ* subject in its specifier.

Compared to the Voice systems of Philippine-type languages, the active Voice inventory of Malay/Indonesian languages is diminished. These languages do not employ separate Voice morphology for cross-referencing benefactive, locative or recipient arguments. Rather, they have developed applicative marking that promotes such arguments to direct objects. As a result, any argument other than the subject that serves as Pivot is cross-referenced by Object Voice, as in the benefactive construction (39).

(39) **All extracted internal arguments trigger Object Voice**

- a. Nyoman alih-ang cang anak luh ento
N. OV.seek-APPL I person female that
- b. anak luh ento alih-ang cang Nyoman
person female that OV.seek-APPL I N.
(i) 'I sought that girl for Nyoman.'
(ii) 'I sought Nyoman for that girl.'

Regardless of the thematic role of the internal argument promoted to Pivot, the verb lacks any prefixes. Rather, it is suffixed by the applicative marker *-ang*. Furthermore, Balinese treats its internal arguments symmetrically. In constructions with multiple internal arguments, either can be promoted to Pivot. Because there is no variation in verbal morphology conditioned by which argument is fronted, the sentence is ambiguous. The fronted argument can be understood either as the benefactee or the direct object.

As (38-40) illustrate, Balinese lacks overt case morphology. There is no morphology to cross-reference the grammatical role of the nominal. Nevertheless, the language can inform our understanding of the effects of K^0 on the distribution of nominals, because, in certain circumstances, it displays a head-head adjacency requirement, which I have suggested is a diagnostic of KP-lessness, arising to obviate the proposed Case Filter.

Balinese displays an alternation between extracted and *in situ* subjects. However, it is not an alternation involving distinct case morphemes. Instead, it is an alternation between case-marked and KP-less nominals. Crucially, Balinese *in situ* subjects, the postverbal subjects of Object Voice clauses, display strict head-head adjacency with the verb. This requirement should be immediately reminiscent of PNI objects discussed above. The requirement is instantiated by a number of dichotomies which target *in situ* subjects to the exclusion of subjects promoted to Pivot and all internal arguments.

First, while Balinese generally displays free word order, *in situ* subjects must be linearly adjacent to the verb. No element can intervene between the subject of an OV clause and the verb. The subject must be immediately postverbal (e.g. Clynes 1995, Wechsler & Arka 1998, Arka 2004).

(40) *OV subjects must be immediately postverbal* (Wechsler & Arka 1998)

- | | | |
|----|--|----------------------------|
| a. | Siap-e <i>uber</i> <i>cicing</i> ke jalan-e
chicken-DEF OV.chase dog into street-DEF
'A dog chased the chicken into the street.' | S V O _{Agent} PP |
| b. | <i>Uber</i> <i>cicing</i> ke jalan-e siap-e
OV.chase dog into street-DEF chicken-DEF
'It was a chicken that the dog chased into the street.' | V O _{Agent} S PP |
| c. | * <i>Uber</i> siap-e <i>cicing</i> ke jalan-e | *V S O _{Agent} PP |
| d. | *Siap-e <i>uber</i> ke jalan-e <i>cicing</i> | *S V PP O _{Agent} |

In neutral word order (40a), the OV subject is realized in immediately postverbal position. So long as the relative order of these two elements is preserved, other permutations are possible. In (40b), the Pivot of the OV clause, *siap-e* 'the chicken' is extraposed to the right edge of the clause as a means of focusing the constituent. Adjacency between the verb and *in situ* subject is maintained, yielding grammaticality. However, whenever the OV subject is not realized in immediately postverbal position (40c, d), ungrammaticality arises. This effect is limited to *in situ* subjects. Intervention is licit between the verb and objects in both OV and SV clauses (41a,b) as well as pre-verbal subjects in Subject Voice clauses (41c).

(41) *Intervention is licit elsewhere.*

- | | |
|----|--|
| a. | <i>Siap-e</i> ke jalan-e <i>uber</i> cicing
<i>chicken-DEF</i> into street-DEF OV.chase dog |
| b. | Cicing <i>ng-uber</i> ke jalan-e siap-e
dog SV-chase into street-DEF chicken-DEF |
| c. | <i>Cicing</i> ke jalan-e <i>ng-uber</i> siap-e
<i>dog</i> into street-DEF SV-chase chicke-DEF
'A dog chased the chicken into the street.' |

The same effect can be illustrated using adverbs which display relatively free placement. In an SV clause, a manner adverb can be realized at the clausal edges and between either argument and the verb (42).

(42) *Adverbs display relatively free word order* (Wechsler & Arka 1998).

- a. *Sanget-sanget* ia nepak gamelan-e
very-very 3 SV.hit gamelan-DEF
- b. Ia *sanget-sanget* nepak gamelan-e
3 very-very SV.hit gamelan-DEF
- c. Ia nepak *sanget-sanget* gamelan-e
3 SV.hit very-very gamelan-DEF
- d. Ia nepak gamelan-e *sanget-sanget*
3 SV.hit gamelan-DEF very-very
'(S)he was hitting the gamelan really hard.'

The placement options in OV are reduced. Specifically, the manner adverb cannot appear between the verb and postverbal subject (43c). Nevertheless, it can appear in all other positions.

(43) *Adverbs cannot disrupt OV verb-subject adjacency.*

- a. *Sanget-sanget* gamelan-e depak ia
very-very gamelan-DEF OV.hit 3
- b. Gamelan-e *sanget-sanget* depak ia
gamelan-DEF very-very OV.hit 3
- c. *Gamelan-e depak *sanget-sanget* ia
gamelan-DEF OV.hit very-very 3
- d. Gamelan-e depak ia *sanget-sanget*
gamelan-DEF OV.hit 3 very-very
'(S)he was hitting the gamelan really hard.'

Again, postverbal, *in situ* subjects pattern distinctly compared to direct objects in both Voices as well as SV subjects promoted to Pivot. Only *in situ* subjects display an adjacency requirement with the verb. The data in (41-44) quite strongly indicate that verb-subject adjacency is the special case, and that word order freedom is a true 'elsewhere' condition in Balinese.

The head-head adjacency requirement of *in situ* subjects is further demonstrated by their inability to undergo movement. As a means of topicalizing the non-Pivot argument, it can be fronted to the beginning of the clause. In an SV clause, both the canonical SVO word order and the marked OSV word order are well-formed (44) (Arka 2004).

(44) *Non-Pivot objects can front*

- a. Tiang_i nunas t_i kopi-ne niki
1 SV.take coffee-DEF this
'I took this coffee.'
- b. [Kopi-ne niki]_j tiang_i nunas t_i t_j
coffee-DEF this 1 SV.take
'This coffee, I took it.'

By contrast, the *in situ* subject of an OV clause cannot be topicalized to clause-initial position (45). OVS word order is grammatical, but SOV is unattested.

(45) ***Non-Pivot subjects cannot front***

- a. Ia_j uber cicing t_j
 3 OV.chase dog
 ‘A dog chased him/her.’
- b. *Cicing_i ia_j uber t_i t_j
 dog 3 OV.chase
 ‘A dog, it chased him/her.’

These facts can be captured if *in situ* subjects must maintain a head-head adjacency relationship with the verb. This adjacency relationship is disrupted if the non-Pivot subject is fronted via topicalization.

The same pattern can be detected in *wh*-question formation, suggesting that inability to topicalize a non-Pivot subject cannot be attributed to the information-structural import of topicalization. Balinese, like other Austronesian-type languages mentioned above, shows *wh*-extraction asymmetries.¹⁶ When the verb bears Subject Voice, only the subject can be extracted (46). Similarly, subjects cannot be extracted in OV constructions (47).

(46) ***Subject Voice blocks object extraction***

- a. Nyen_i t_i ngalih t_i bawi-ne punika ditu ibi?
 who SV.seek pig-DEF that there yesterday
 ‘Who looked for that pig there yesterday?’
- b. *Apa_j ci_i ngalih t_i t_j ditu ibi?
 what you SV.seek there yesterday
 ‘What did you look for there yesterday?’

¹⁶ In addition to *wh*-extraction, Malay/Indonesian languages permit *wh*-in situ constructions. In such constructions, any argument can be questioned regardless of Voice, as illustrated for Balinese by the data in (i).

(i) ***In situ wh-questions show no Voice asymmetries:***

- a. Nyen meli montor anyar?
 who SV.buy car new
- b. Montor anyar beli nyen?
 car new OV.buy who
 ‘Who bought a new car?’
- c. Cicing ngugut nyen?
 dog SV.bite who
- d. Nyen gugut cicing?
 who OV.bite dog
 ‘Who did the dog bite?’

These facts indicate that Voice only restricts extraction, and not whether the non-Pivot argument can be questioned.

(47) **Object Voice blocks subject extraction**

- a. Apa_j t_j beli Nyoman t_j?
what OV.buy Nyoman
'What did Nyoman buy?'
- b. *Nyen_i [montor anyar]_j beli t_i t_j?
who car new OV.buy
'Who bought a new car?'

Based upon the extraction asymmetries illustrated above, it is often reported that *wh*-extraction only targets the nominal cross-referenced by Voice (e.g. Wechsler & Arka 1998, Arka 2004). Example (46a) might be analyzed as an instance of *wh*-in situ (see fn.16). However, more complex examples involving object scrambling show that *wh*-subjects can undergo movement in the Subject Voice, as discussed by Arka (2004). However, in constructions like (47a), it is unclear whether *wh*-extraction arises rather than *wh*-in situ, since scrambling the subject before the verb in OV is independently ungrammatical (46b). Furthermore, given the relatively free word order of adverbial elements, we cannot be sure that the relative position of the *wh*-phrase with respect to an adverbial indicates overt movement. Nevertheless, based on the availability of unambiguous subject *wh*-extraction, I conclude that object *wh*-extraction should be well-formed, as well. This is confirmed below.

However, as with topicalization, multiple arguments can be extracted in *wh*-question constructions. To see this, we must first recognize that Voice morphology does not invariably represent promotion to Pivot in Balinese; instead, the Voice morphology resulting from the choice of Pivot can be subsequently overwritten. A *wh*-object can be extracted over a subject which has previously been extracted to Pivot position, indicated by its pre-verbal position, so long as the verb appears in OV. Compare (48a,b) to (47b).

(48) **OV permits non-subject extraction**

- a. Apa_j ci_i alih t_i t_j ditu ibi?
what you OV.seek there yesterday
'What did you look for there yesterday?'
- b. [Buku cen]_j Nyoman_i baca t_i t_j?
book which Nyoman OV.read
'Which book did John read?'

In (48), neither argument is *in situ*. Instead, both are realized to the left of the verb.¹⁷ Comparing multiple extraction constructions in *wh*-questions and topicalization, we can see that not all extraction is marked

¹⁷ A similar observation has been made from Bahasa Indonesia relative clauses (e.g. Chung 1976,1978 and Cole & Hermon 2005). As in matrix *wh*-questions, relative clauses display extraction asymmetries. An object cannot be relativized if the predicate of the embedded clause bears SV morphology and the subject is in Pivot position (i).

(i) **Voice restricts extraction in relative clauses** (Cole & Hermon 2005)

*[Buku [yang Budi tidak akan **mem-baca**]] sangat menarik
[book [YANG B. NEG will SV-read]] very interesting
'The book that Budi will not read is very interesting.'

equally. *Wh*-extraction of the object over the subject requires OV morphology. Topicalization requires SV morphology. I suggest that the positions targeted by these movements are distinct; and while movement to the former results in a change of overt Voice morphology; movement to the latter does not. This behavior of overwriting verbal morphology is reminiscent of Chamorro *wh*-agreement morphology which overwrites canonical ϕ -agreement with Voice morphology upon *wh*-movement (e.g. Chung 1994). I provide an account of the derivation of examples like (48) in Chapter 4. For now, observe that this word order requires the subject to be promoted to Pivot followed by *wh*-extraction of the object, confirming that *wh*-movement can target a position above the position of the Pivot.

When the full distribution of *wh*-extraction possibilities are taken into account, a familiar dichotomy is realized. All arguments can undergo *wh*-extraction except for *in situ* subjects. The relevant data is reproduced below.

(49) ***Only in situ subjects cannot be wh-extracted***

- a. *Nyen_i t_i ngalih t_i bawi-ne punika ditu ibi?*
who SV.seek pig-DEF that there yesterday
 ‘Who looked for that pig there yesterday?’
- b. *Apa_j t_j beli Nyoman t_j?*
what OV.buy Nyoman
 ‘What did Nyoman buy?’
- c. *[Buku cen]_j Nyoman_i baca t_i t_j?*
book which Nyoman OV.read
 ‘Which book did John read?’
- d. **[Anak cerik cen]_i be-e_j daar / naar t_i t_j?*
person small which fish-DEF OV.eat SV.eat
 ‘Which boy ate the fish?’

Unlike *wh*-extraction of the object over a Pivot subject (48) and (49c), it is impossible to *wh*-extract a subject over an object Pivot (49d), regardless of Voice. This dichotomy illustrates the head-head adjacency requirement which holds of the verb and *in situ* subjects. Subsequent syntactic operations like *wh*-movement, which disrupt this adjacency, yield ungrammaticality. This behavior is also attested in PNI: movement of the PNI object to a VP-external position, to the left of manner adverbs, results in ungrammaticality.¹⁸ With regard to

However, if the verb appears in OV, object relativization can accompany subject extraction (ii).

(ii) ***OV permits object extraction in relative clauses*** (Cole & Hermon 2005)

- [Buku [yang Budi tidak akan **baca**]] sangat menarik
- [book [YANG B. NEG will OV.read]] very interesting
- ‘The book that Budi will not read is very interesting.’

We can see that the subject has undergone movement, because it is realized to the left of auxiliaries and negation. Like Balinese matrix *wh*-questions, the behavior of Bahasa Indonesia relative clauses reveals that OV is dissociable from extraction. See also Cole et al. 2008 and Yanti 2010 for similar observations in other Malay/Indonesian languages.

¹⁸ Baker (2014) demonstrates that Tamil also does not permit scrambling of Caseless objects to clause-initial position.

other arguments, no such restriction is attested, because these arguments do not need to surface next to the verb.

Recall now that the adjacency requirement of PNI holds between the head of the PNI nominal and the head of its host – not merely between the host and the PNI object as a whole. This is true with respect to these Balinese subjects, as well. Balinese, like Tongan discussed above, has a small class of adjectives that can appear pre- or post-nominally (50), but, crucially, must appear post-nominally when modifying *in situ* subjects (51). (These adjectives seem to behave as numerals or weak quantifiers, but a thorough examination of all the possible adjectives that can appear in this position is still pending.)

(50) ***Variable positions of Balinese adjectives***

- a. (Liu) cicing (liu) ngugut Nyoman
(many) dog (many) SV.bite N.
'Many dogs bit Nyoman.'
- b. Cicing-e ngugut (liu) anak cerik (liu)
dog-DEF SV.bite (many) person small (many)
'The dog bit many children.'
- c. (Liu) anak cerik (liu) gugut cicing
(many) person small (many) OV.bite dog
'A dog bit many children.'

(51) ***Adjective intervention between verb and in situ subjects is ungrammatical***

Nyoman gugut (*liu) cicing (liu)
N. OV.bite (*many) dog (many)
'Many dogs bit Nyoman.'

Again, the subjects of OV clauses pattern to the exclusion of other core arguments in either Voice. Only these arguments disallow variable nominal-internal word order. Head-head adjacency must be observed between the verb and OV subject. Intervening adjectives, just like intervening NPs and PPs, break up this adjacency. Just as in the PNI data discussed above, inert NP analyses cannot account for NP-internal word order rigidity; An inert NP is not expected to display any NP-internal word order effects. As noted above, it is conceivable that the NP-internal word order effects displayed in Tongan and Chamorro PNI can be captured under this type of analysis. Specifically, the illicit modifier-noun orders may only be possible when the modifier occupies a position with the functional, DP-layer of the nominal. If PNI in these languages requires NP objects, the position of these modifiers is independently ruled out. Crucially, Balinese does permit DPs as *in situ* subjects. Nevertheless, head-head adjacency is still required. This suggests that a ban on full DPs cannot be enough to rule out the nominal-internal word order effects in all cases. The facts can be accorded a uniform explanation if structurally reduced nominals of all kinds must be licensed by alternative means, requiring head-head adjacency.

Another instantiation of the head-head adjacency requirement of *in situ* subjects can be found in the so-called 'definiteness effect' imposed on such elements, though I will argue below that this is a misnomer

as it pertains to this phenomenon in Balinese. Certain definite nominals are disallowed as *in situ* subjects. Specifically, definite descriptions which are marked with the definite suffix *-e* and/or overt determiners like *ento* ‘that’ are illicit.

(52) ***Definite descriptions are barred as in situ subjects.*** (Wechsler & Arka 1998)

I Wayan gugut cicing / *cicing-e (ento)
 ART W. OV.bite dog *dog-DEF (that)
 ‘A/*that dog bit Wayan’

SV subjects and direct objects, regardless of Voice, may occur with the definite suffix and overt determiners.

Examining more complex nominals, it can be seen that the Balinese definite suffix attaches to the right of the nominal, regardless of nominal-internal material (53).

(53) ***The definite suffix affixes to the right edge of NP*** (Arka 2004)

- a. dagang-e
 trader-DEF
 ‘the trader’
- b. dagang celeng-e
 trader pig-DEF
 ‘the pig trader’
- c. dagang celeng uli Badung-e
 trader pig from B.-DEF
 ‘the pig trader from Badung’

This indicates that the DP is right-headed, with the D^0 suffixing to its NP-complement (Arka 2004).

Crucially, there is not a categorical ban placed on definite nominals as *in situ* subjects. The key factor in determining the well-formedness of *in situ* subjects is head-head adjacency. Some definite DPs – pronouns and proper names – can surface as *in situ* subjects.

(54) ***Definite in situ subjects***

- a. Be-e daar ida
 fish-DEF OV.eat 3
 ‘(S)he ate the fish.’
- b. Be-e daar Nyoman
 fish-DEF OV.eat N.
 ‘Nyoman ate the fish.’

Balinese is unlike many PNI languages which disallow pronouns and proper names as PNI objects. Furthermore, this is not an instance of differential subject marking, because it groups together indefinite subjects, pronouns, and proper names, to the exclusion of definite subjects (unlike differential argument marking; see Aissen 2003).

The definite nominals which can surface as *in situ* subjects behave like other nominals in this position, displaying the same linear adjacency requirement with the verb.

(55) ***Definite in situ subjects must be head adjacent to the verb.***

- a. **Uber* siap-e *ia* ke jalan-e
 OV.chase chicken-DEF 3 into street-DEF
 ‘(S)he chased the chicken into the street.’
- b. *Siap-e *uber* ke jalan-e *ia*
 chicken-DEF OV.chase into street-DEF 3
 ‘(S)he chased the chicken into the street.’
- c. *Gamelan-e *depak* sanget-sanget *ia*
 gamelan-DEF OV.hit very-very 3
 ‘(S)he hit the gamelan really hard.’

Definite non-Pivot subjects cannot be separated from the verb by adjuncts (55). Similarly, just as indefinite *in situ* subjects could not front to clause-initial position in topicalization constructions, neither can *in situ* subject pronouns.

(56) ***Non-Pivot subject pronouns cannot front*** (Arka 2004)

- a. Ooh, enggak, niki, kopi-ne tunas tiang
 oh yes this coffee-DEF OV.take 1
 ‘Oh well, this, the coffee ... I have it.’
- b. *Ooh, enggak, tiang niki kopi-ne tunas
 oh yes I this coffee-DEF OV.take
 ‘Oh well, this coffee, I have it.’

This behavior, shared by both definite and indefinite subjects, indicates that it is not something about indefinite *in situ* subjects that triggers the head-head adjacency requirement, but rather something more general about any well-formed nominal in that position. The fact that pronouns and proper names are well-formed as *in situ* subjects, while other definite elements are not, follows if pronouns and proper names are unique among DPs in lacking material that occurs to the left of D^0 (or other material associated with the DP layer). As such, no material can intervene between them and the verb, and the head-head adjacency requirement is satisfied.

As with PNI objects, the representation relevant to evaluating the head-head adjacency of *in situ* subjects is one of linear order. Material (the NP) that is hierarchically lower than, but linearly precedes D^0 (the definite suffix) intervenes to disrupt head-head adjacency. The sensitivity of adjacency between Caseless arguments and the verb to linear order, both with PNI and with *in-situ* subjects, provides strong evidence that these phenomena should be captured with the same mechanism.

Above, we saw that PNI NP objects are narrowest scope indefinites, requiring an indefinite interpretation and taking obligatory narrow scope with respect to quantificational elements. This behavior was attributed to

the NP-status of the PNI object, not the phenomenon of PNI itself. If Balinese permits non-Pivot subjects to be DPs, it is expected that *in situ* subjects could take wide scope. Confirming this expectation, *in situ* subjects permit scope variability. The subject can take wide or narrow scope with respect to another quantified argument and negation (57).

(57) ***Balinese in situ subjects display scope variability***

- a. Sabilang anak demen-in anak luh
 every person OV.happy-APPL person female
 ‘A woman liked everybody.’ [$\exists > \forall; \forall > \exists$]
- b. Nyoman sing gugut cicing
 N. NEG OV.bite dog
 ‘A dog didn’t bite Nyoman.’ [$\exists > \neg; \neg > \exists$]

Even in the absence of an overt determiner, *in situ* subjects can be interpreted as DPs. This, in turn, confirms that the interpretive properties of the internal argument are not causally related to head-head adjacency in the general case, despite the overall correlation between indefiniteness/non-specificity and VP-internal position (e.g. Diesing 1992).

The head-head adjacency requirement demonstrated by Balinese *in situ* subjects is reminiscent of similar requirements of PNI constructions discussed above. Furthermore, both constructions do allow the nominal to be modified with adjectives and comitative PPs, precluding an analysis in terms of morphological Noun Incorporation.

(58) ***Balinese in situ subjects can be modified*** (Arka 2004).

- a. Ia alih dagang celeng uli Badung
 3 OV.look.for trader pig from B.
 ‘A pig trader from Badung look for him/her.’
- b. Ia ngipi [uber macang ajak lalipi gede]
 3 dream OV.chase tiger and snake big]
 ‘He dreamt of being chased by a tiger and a big snake.’

Given the strong similarities in head-head adjacency requirements between PNI objects and Balinese *in situ* subjects, I propose that this adjacency should be captured by the same mechanism. Before presenting this mechanism, I discuss Malagasy as another language which requires linear head-head adjacency between the verb and *in situ* subject. Malagasy provides further support for the view that some Austronesian *in situ* subjects lack K^0 altogether.

3.3.3 Malagasy head-head adjacency

Malagasy, like Balinese, displays a surface head-head adjacency requirement between non-Pivot subjects and the verb. Differences between Balinese and Malagasy phrase structure lead to a more permissive set

of nominals that can be realized as licit *in situ* subjects. Nevertheless, in both languages the adjacency requirement signals that non-Pivot subjects, like PNI objects, lack K^0 and must obviate the proposed Case Filter in order to be well-formed.

Unlike Balinese, Malagasy is a head-initial language with relatively strict word order, often described as VOS. The Pivot, regardless of thematic role, is normally clause-final.¹⁹ Malagasy displays three Voices, as in (59).

(59) **Malagasy Voice system** (Pearson 2001).

- a. Nametraka ny boky teo ambonin'ny latabatra ny vehivavy
PST-SV.put DET book PST-there on.top-DET table DET woman
'The woman put the books on the table.'
- b. Napetran'ny vehivavy teo ambonin'ny latabatra ny boky
PST-OV.put-DET woman PST-there on.top-DET table DET book
'The books, the woman put (them) on the table.'
- c. Nametrahan'ny vehivavy ny boky ny latabatra
PST-OBLV.put-DET woman DET book DET table
'The table, the woman put the books (on it).'

In (59a), the subject *ny vehivavy* 'the woman' serves as Pivot, cross-referenced by SV morphology on the verb. (59b) expresses the same event as (59a), but the object *ny boky* 'the book(s)' has been promoted to Pivot. This change correlates with a difference in Voice morphology: in place of the SV form, the OV form is realized. Finally in (59c), the goal/location *ny latabatra* 'the table' serves as Pivot, and the verb appears in the Oblique Voice (OblV).

The Pivot in Malagasy must be a formally definite DP – a pronominal, a proper name, a definite common noun phrase, generic, or strongly quantificational (as in Milsark 1977). All formally definite DPs in Malagasy display an overt determiner.²⁰ Indefinite noun phrases, which lack an overt determiner, cannot function as Pivots (Pearson 2001):

(60) **Malagasy Pivots must be definite** (Pearson 2001)

- *Nametraka ny boky teo ambonin'ny latabatra vehivavy
PST.SV.put DET book PST.there on.top-DET table woman
'A woman put the books on the table.'

Generally, the Pivot picks out the participant to which the speaker wishes to assign greatest referential prominence, the argument of which the rest of the clause is predicated (Pearson 2001, 2005).

¹⁹ Certain complement clauses, as well as sentence-level adverbs such as *omaly* 'yesterday', frequently appear after the Pivot. For some discussion of post-Pivot constituents, see Pearson (2001) and, more recently Potsdam & Edmiston (2015).

²⁰ For proper names the determiner is *i* or *Ra-* (the latter is written as a prefix and often treated as part of the name). Common noun phrases may take the determiner *ny* or demonstratives. The demonstrative *ilay* 'that [previously mentioned]' is discourse-anaphoric while the demonstratives *io* 'this' and *iny* 'that' are deictic (Pearson 2005).

Unlike Balinese, Malagasy displays some variation in nominals based on grammatical function. Pronouns vary in form depending on their position in the sentence. The form of the pronoun is distinct when the pronoun serves as Pivot (61a), non-Pivot subject (61b), and non-Pivot object (61c). The third person pronoun illustrates these distinctions below.

(61) *Malagasy pronoun forms are conditioned by grammatical function.* (Pearson 2005)

- a. Namangy ny ankizy **izy**
PST.SV.visit DET children **3**
'He/she/they visited the children.'
- b. Novangia-**ny** ny ankizy
PST.OV.visit-**3** DET children
'He/she/they visited the children.'
- c. Namangy **azy** ny ankizy
PST.SV.visit **3** DET children
'The children visited him/her/them.'

This morphological alternation in the pronouns is usually held to be a reflex of Case assignment, reflecting nominative, genitive, and accusative respectively (e.g. Keenan 1976; Voskuil 1993). However, see Pearson (2001, 2005) for arguments that the nominative and genitive cases should be collapsed. I contend that while Pivots and non-Pivot objects may be case-marked, the form of non-Pivot subjects signals a complete absence of K^0 and [u Case].

Despite some differences, Balinese and Malagasy display a crucial similarity. Non-Pivot subjects must be strictly adjacent to the verb, suggesting they lack K^0 . For example, adverbials may not intervene between the verb and the non-Pivot subject (62).

(62) *Malagasy in situ subjects must be adjacent to the verb* (Pearson 2005).

- a. Nohanin' ny gidro haingana ny voankazo omaly
PST.OV.eat DET lemur quickly DET fruit yesterday
'The lemur ate the fruit quickly yesterday.'
- b. *Nohanin(a) *haingana* ny gidro ny voankazo omaly
- c. *Nohanin(a) *omaly* ny gidro haingana ny voankazo

The adjacency requirement does not hold of other arguments. Arguments cross-referenced by Voice appear in clause-final position, permitting all other arguments and adjuncts to intervene between them and the verb in initial position. Furthermore, internal arguments not cross-referenced by Voice (63a) and sole arguments of intransitives (63b) generally need not be immediately adjacent to the verb (Pearson 1998, Rackowski 1998, Rackowski & Travis 2000).

(63) *Adjacency is not required elsewhere* (Pearson 1998)

- a. Nijinja *an-tsirambina* ny vary ny mpamboly
PST.SV.cut carelessly DET rice DET farmer
'The farmer harvested the rice carelessly.'
- b. Maty *angamba* ny vadiny
PST.die probably DET wife-3S
'His wife probably died.'

Just as in Balinese, Malagasy displays a dichotomy between arguments. Only *in situ* subjects require head-head adjacency with the verb. Pearson (2005), citing Ouhalla (1994), observes that verb-initial languages like Berber, Semitic, and Celtic also have adjacency requirements on post-verbal subjects. Crucially, the Balinese data suggests that verb-initiality is not a necessary condition on such adjacency phenomena.

The adjacency requirement on *in situ* subjects also supercedes the positional requirements of other nominals. Unlike internal arguments bearing overt determiners (63a), bare, non-Pivot objects cannot be separated from the verb by adverbs (64) (Rackowski & Travis 2000, Pearson 2001, Paul 2004, Travis 2008). Nevertheless, such elements can be separated from the verb by *in situ* subjects (65).

(64) *Malagasy bare internal arguments display adjacency requirements* (Paul 2004)

- a. Mamitaka ankizy matetika Rabe
SV.trick child often R.
'Rabe often tricks children.'
- b. *Mamitaka *matetika* ankizy Rabe
SV.trick often child R.
'Rabe often tricks children.'

(65) *In situ subjects break up this adjacency.* (Paul 2004)

- Nividianan-dRaso *akanjo* ny ankizy
PST.OBLV.buy-R. clothes DET child
'Raso bought clothes for the children.'

Malagasy bare arguments are DPs with a null determiner (Zribi-Hertz & Mbolatianavalona 1997, Paul 2004). Bare arguments do not display strict head-head adjacency (65). Rather, their tendency to be immediately post-verbal is an indication that they must remain VP-internal, while DPs with overt determiners can undergo movement to VP-external positions. This ability can be captured if such movement is conditioned by semantic interpretation (e.g. Diesing 1992), or more general conditions on object shift as proposed for Niuean above (Rackowski & Travis 2000).

Like Balinese, ungrammaticality arises whenever the *in situ* subject is not adjacent to the verb due to intervention of other arguments or adverbs. It was also observed for Balinese that subsequent syntactic operations that disturb the adjacency requirement yield ungrammaticality. These effects are, unfortunately, untestable in Malagasy. I leave it as an open question why this should be. Malagasy, like Philippine and

Formosan languages, does not permit non-Pivot subjects to undergo further \bar{A} -operations (e.g. Guilfoyle et al. 1992). Only the argument cross-referenced by Voice can be extracted. If the subject is clefted, then the verb appears in the SV form (66a); if the object is clefted, the OV form must be used (66b), and if an oblique DP is clefted, the OblV form is required (66c).²¹

(66) ***Malagasy \bar{A} -operations are limited to Pivots*** (Pearson 2005)

a. *Subject Voice*

- (i) Ny mpamboly no mamono ny akoho amin'ny antsy
 DET farmer FOC SV.kill DET chicken with-DET knife
 'It's the farmer who is killing the chickens with the knife.'
- (ii) *Ny mpamboly no vonoina amin'ny antsy ny akoho
- (iii) *Ny mpamboly no amonoana ny akoho ny antsy

b. *Object Voice*

- (i) Ny akoho no vonoin'ny mpamboly amin'ny antsy
 DET chicken FOC OV.kill DET farmer with-DET knife
 'It's the chickens that the farmer is killing with the knife.'
- (ii) *Ny akoho no mamono amin'ny antsy ny mpamboly
- (iii) *Ny akoho no amonoan'ny mpamboly ny antsy

c. *Oblique Voice*

- (i) Ny antsy no amonoan'ny mpamboly ny akoho
 DET knife FOC OBLV.kill DET farmer DET chicken
 'It's the knife that the farmer is killing the chickens (with).'
- (ii) *Ny antsy no namono ny akoho ny mpamboly
- (iii) *Ny antsy no novonoin'ny mpamboly ny akoho

Only when the argument in initial position is the argument cross-referenced by Voice is the cleft construction well-formed. It is not possible to extract non-Pivot arguments in any combination of arguments and Voice. The same facts hold of other \bar{A} -operations, like *wh*-question formation and topicalization.

Furthermore, the possible arguments that can serve as *in situ* subjects in Balinese and Malagasy are not identical. In Malagasy, there is no definiteness restriction. In addition to pronouns (67a) and proper names (67b), both definite descriptions, marked by the determiner *ny* (or demonstratives) (67c), and indefinite descriptions²² (67d), lacking such modification, can serve as non-Pivot subjects. These possibilities are presented in (67).

²¹ These restrictions only apply when a DP is clefted. When a PP or adverbial is clefted, the verb may appear in any Voice. See Paul (1999) and Pearson (2001) for discussion.

²² For some speakers *in situ* subjects must be formally definite. This judgment is a tendency, not an absolute (Keenan 2008).

(67) *Possible non-Pivot subjects in Malagasy*

- a. Vonoiko amin'ny antsy ny akoho
OV.kill.1S with-DET knife DET chicken
'I am killing the chickens with the knife.'
- b. Vonoin-*dRamatoa* amin'ny antsy ny akoho
OV.kill-R. with-DET knife DET chicken
'Ramatoa is killing the chickens with the knife.'
- c. Rakofana ny kopy ny tsaramaso
OV.cover DET cup DET bean
'The cup covered the beans.'
- d. Rakofana kopy ny tsaramaso
OV.cover cup DET bean
'A cup/cups covered the beans.'

This result is, in fact, expected if a head-head adjacency requirement is at play in both Balinese and Malagasy. Unlike Balinese, in which the definite marker *-e* and other demonstratives follow the NP they modify, the Malagasy definite-markers crucially appear before the nominals they modify. As such, overt NP-material will not serve to break up the necessary head-head adjacency between the verb and the nominal. A descriptive generalization then emerges; the highest overt head in the extended nominal projection, whatever it is, must be adjacent to the verb.

In Malagasy, head-head adjacency is not interrupted by nominal-internal elements either. Nominal modifiers uniformly appear post-nominally (Bennett 1986, Dez 1990, Keenan 2008), as illustrated below.

(68) *Malagasy Adjectives are postnominal* (Keenan 2008).

- a. Mahita saka kely telo eo an-tokotany aho
PRS.SV.see cat little three there in-yard 1S
'I see three little cats in the yard.'
- b. Niantra teny tsy latsaky ny teonjato sy arivo isika
PST.SV.study word not less the 300 and 1000 1.INCL
'We have studied no fewer than 1,300 words.'

In this regard, Malagasy is much like Niuean and Sakha discussed above. Nominal-internal word order is such that head-head adjacency necessarily obtains so long as no nominal external material intervenes.

The Malagasy non-Pivot subject may be phrasal, much like PNI objects and Balinese *in situ* subjects. Therefore, the subject and verb do not seem to constitute a complex head in the syntax. For example, the subject may be coordinated (69).

(69) *Malagasy in situ subjects can be coordinated* (Pearson 2005).

- Vonoin-*dRamatoa* sy Ranaivo amin'ny antsy ny akoho
OV.kill-R. and R. with-DET knife DET chicken
'Ramatoa and Ranaivo are killing the chickens with the knife.'

These facts are similar to the Balinese data discussed above. To summarize, Malagasy non-Pivot subjects, just like their Balinese counterparts, must be immediately adjacent to the verb, prohibiting any material from intervening between the two.

The evidence from Balinese and Malagasy suggests that, like Atayal, Tagalog and Dinka discussed at the outset of this section, these languages exhibit a case alternation amongst subjects given the Voice of the clause. The alternation is, however, not one between two distinct case-markings. Rather it is an alternation between the presence and absence of Case – i.e. the presence and absence of K^0 . Just like PNI objects, the behavior of Balinese and Malagasy subjects indicates that an alternative licensing strategy which yields head-head adjacency must be active, in the absence of K^0 , to obviate the proposed Case Filter. Such an analysis predicts that Austronesian languages which display morphological case-alternations on Pivot and non-Pivot subjects will not display the same head-head adjacency requirements.²³ This prediction is borne out. In Squliq Atayal (70) and Tagalog (71), other arguments and adjuncts can intervene between the verb and the *in situ* argument.

(70) **Squliq Atayal non-Pivot subjects do not require verbal adjacency** (Michael Y. Erlewine, p.c.)

- a. Cyux biq-**an** *pila* na Tali qu Yumin
AUX give-LV money GEN T. QU Y.
'Tali gives Yumin money.'
- b. Wal=saku kt-**an** (*hera*) na Tali (*hera*)
AUX.PST=1S.NOM see-OV (yesterday) GEN T. (yesterday)
'Tali saw me yesterday.'

(71) **Tagalog non-Pivot subjects do not require verbal adjacency**²⁴ (Kroeger 1993)

- a. ?Sinulat- \emptyset *ang liham* ni Juan
ASP.write-OV ANG letter CS J.
'Juan wrote the letter.'
- b. Binisita- \emptyset (*sa palasyo*) ni Juan *ang hari* (*sa palasyo*)
ASP.visit-OV (DAT palace) CS J. ANG king (DAT palace)
'Juan visited the king in the palace.'

These facts suggest that, when an alternative case-marking is available, K^0 is present, and the alternative

²³ Another logical possibility is a language that displays a case alternation in which one of the case-markers is null.

²⁴ Kroeger (1993) observes that while post-verbal word order in Tagalog is fairly free, the preferred word order in non-SV clauses is for the subject to immediately follow the verb. Some speakers find other orders unnatural. Further, Hsieh & Travis (2014) observe that the duration of the verb when followed by a non-Pivot subject is shorter than when followed by any other nominal, signalling that the verb and immediately adjacent non-Pivot subject have a closer prosodic relationship than the verb followed by other KPs: i.e. they are part of the same prosodic domain, while other KPs are separated from the verb by a (relatively strong) prosodic boundary. If we can assume that there is a close relationship between syntactic and prosodic constituent structure, this suggests that the syntactic relationship between the verb and non-Pivot subject KPs differs from that between the verb and other KPs, suggesting that in Tagalog the verb has a special relationship with a non-Pivot subject. However, this relationship is not realized as strict head-head adjacency.

licensing strategy which results in head-head adjacency need not be employed.²⁵

The head-head adjacency requirement in Balinese and Malagasy *in situ* subjects cannot be captured as a consequence of the nominals simply having to remain in their base-position. The highest overt head of the nominal in question must be linearly adjacent to the verb. When nominal-internal material, like adjectives, disrupts head-head adjacency, ungrammaticality arises. Furthermore, if we are to capture adjacency as arising from the same mechanism in both environments, this head-head adjacency cannot be understood as a consequence of the nominal being significantly reduced. Unlike most PNI objects, except those in Diyari, *in situ* subjects are not (visibly) reduced. They can host elements associated with the DP-layer including pronouns, proper names, demonstratives, etc. We have seen clear evidence that PNI objects lack K^0 . For instance, ergative case is not assigned to the subject of PNI clauses in Niuean and Tongan. One result of this is head-head adjacency. We can capture the similar behavior of *in situ* subjects if these nominals also lack K^0 . In light of the KP hypothesis, nominals can display full DP architecture and still be subject to an alternative licensing requirement. Elements which lack K^0 must be realized in certain positions, and certain forms, to ensure that they satisfy head-head adjacency.

3.4 Conclusion

Both PNI objects and *in situ* subjects in Balinese and Malagasy, despite their differences in position, size, and interpretation, obey a strict head-head adjacency requirement with the verb, as in (72).

(72) ***Distributional Constraint on non-KP nominals***

The highest overt head in the extended nominal projection, whatever it is, must be linearly adjacent to the verb.

The requirement that the nominal and verbal *heads* be adjacent cannot be captured by previous analyses that attribute adjacency to the immobility or prosodic requirements of structurally reduced nominals. On either approach, strict head-head adjacency is unexpected. Instead, I have posited that the absence of K^0 is the relevant factor. In the absence of K^0 , PNI objects and *in situ* subjects both violate the proposed Case Filter. The well-formed instances indicate that the proposed Case Filter can be obviated. I have posited that, in the absence of K^0 , structurally reduced nominals must still satisfy the Case Filter to be well-formed. One strategy to accomplish this is licensing under adjacency with the verb. Furthermore, this data indicates that K^0 can be understood as abstract Case, acting to determine (in part) the form and distribution of nominals.

²⁵ Coppe van Urk (p.c.) reports that non-Pivot subjects in Dinka must be adjacent to the verbal element in V2 position. No argument or adjunct can intervene. At first blush, this might suggest that Dinka too requires head-head adjacency. However, the distribution of arguments and adjuncts, in general, is more highly constrained in Dinka than in Austronesian. Adverbs cannot appear anywhere in the middle field. As such, the inability of adverbs to intervene between a non-Pivot subject and the verb may not be evidence that head-head adjacency must hold. Furthermore, while Dinka definiteness markers, just as those in Balinese, are realized as suffixes, no definiteness effects are observed on non-Pivot subjects.

When K^0 is present nominals have a different distribution and form than when K^0 is absent. Without K^0 , nominals must occupy positions that conform to the head-head adjacency condition. This requirement restricts which positions structurally reduced nominals can occupy in the clause, and where elements can be realized within the nominals themselves. In the next chapter, I offer a specific account of the adjacency requirement discussed above.

Chapter 4

Licensing via adjunction

The crucial observation of Chapter 3 was that both PNI objects and certain Austronesian *in situ* subjects obey a strict linear head-head adjacency requirement with the verb. This common property holds even though the two environments display a number of differences. The head-head adjacency holds of arguments in distinct positions (object v. subject) and potentially distinct sizes (NP v. DP). A distinct semantics (often) accompanies these differences in syntactic size. In both environments, whenever such adjacency is disrupted ungrammaticality arises. It is possible to disrupt adjacency between the verb and nominal in a number of ways. Elements both outside and inside the nominal have the ability to disrupt adjacency. Intervention by other arguments and adjuncts yields ungrammaticality. Similarly, nominal internal elements like modifiers also trigger ill-formedness. Subsequent syntactic processes can also disrupt the adjacency requirement. When not independently ruled out, movement of KP-less arguments is impossible.

The requirement that the nominal and verbal *heads* be adjacent cannot be captured by previous analyses of the distribution of these nominals. Common analyses of PNI attribute the distribution of smaller-than-KP objects to the immobility or prosodic requirements of structurally reduced nominals. Similarly, analyses of Austronesian Voice systems place no further constraints on the distribution of *in situ* subjects other than that they remain in their base-position. On these approaches strict head-head adjacency is unexpected. Instead, I have posited that Caselessness, i.e. KP-lessness, is the relevant factor. The presence/absence of K^0 determines or, at least, helps to determine the distribution and form of nominals. I suggested that, in the absence of K^0 , structurally reduced nominals may obviate the proposed Case Filter, and be well-formed. Obviating the proposed Case Filter is accomplished under adjacency with the verb. Failure to be realized in a verb-adjacent position does not allow the proposed Case Filter to be obviated, triggering an ill-formed derivation.

In this chapter, I offer an account of the head-head adjacency relationship and why it permits nominals that lack K^0 to obviate the Case Filter. I claim that the head-head adjacency requirement reflects a successful application of *adjunction*, the operation of creating complex terminal nodes that are morphosyntactically atomic. It is this complex head formation that ensures that the nominal head and the verbal head will be

adjacent to each other, and it is this complex head formation that obviates the proposed Case Filter (1). I contend that adjoining the nominal head to the verbal head obviates (1), because the smaller-than-KP nominal projection becomes part of the verbal projection.

(1) ***Proposed Case Filter:***

Noun Phrases must be KPs

Thus, requirements like (1) that dictate the form of nominal projections no longer apply; the force of the proposed Case Filter is eliminated under adjunction.

In Sections 4.1, 4.2, and 4.3, I detail where the proposed adjunction operation takes place, how adjunction is achieved, and why adjunction obviates the proposed Case Filter. In Section 4.4, I discuss how the base-generation of smaller-than-KP can be constrained to limit where such arguments are realized.

4.1 Adjunction is post-syntactic

Adjunction interacts with derivational timing, such that depending on when adjunction takes place it is sensitive to different structural considerations. Probably the most well-known case of adjunction is head-to-head movement which is commonly held to take place within the narrow syntax (e.g. Travis 1984, Baker 1988; though see Matushansky 2006 for an alternative view). In the narrow syntax, adjunction is sensitive to syntactic structure. Adjunction, and resultant head-head adjacency, can also be achieved post-syntactically (e.g. Marantz 1984, Halle & Marantz 1993, Bobaljik 1995). On some articulated theories of post-syntactic operations, syntactic structure may be retained at PF, for at least some time. Thus, even in the post-syntactic component, adjunction may be sensitive to syntactic structure. It may also be sensitive to linear structure, depending on exactly when it takes place (e.g. Embick & Noyer 2001). Lastly, head-head adjacency may also occur in the lexicon (pre-syntax), if derivational morphology is not syntactic.¹

In this section, I demonstrate that the head-head adjacency instantiated by *both* PNI objects and *in situ* subjects does not operate on syntactic-structure, but rather linear order, if we adopt the common assumption that linearization is non-syntactic (e.g. Reinhart 1976, 1979; Chomsky 1995; Fox & Pesetsky 2005; Embick 2007, 2010; Arregi & Nevins 2012).² Two observations lead to this conclusion. First, elements that are hierarchically lower than the two heads which must be adjacent trigger ungrammaticality if they intervene between the smaller-than-KP argument and the verb. Second, discontinuous dependencies cannot be formed to yield the necessary head-head adjacency configurations. These observations suggest an identical post-syntactic locus for adjunction in both cases, after the establishment of linear order.

¹ See Marantz (1997) for a rebuttal of the idea that the lexicon allows derivational procedures. In particular, Marantz reconsiders arguments in Chomsky (1970) to suggest that the lexicon is truly atomic and allows for no complex entities or concatenative procedures. All concatenative operations, according to Marantz, must be in the syntactic computation. Also see Harley (2009) for an argument that compounding, often held to occur in lexicon, is actually a syntax-internal process.

² Though see e.g. Kayne (1994) and Richards (2014) for proposals that suggest that linearization is syntactic.

4.1.1 Linear structure matters

In my mind, the most striking feature of head-head adjacency between PNI objects and the verb and, simultaneously, between *in situ* subjects and the verb is that elements that are hierarchically lower than the two heads which must be adjacent trigger ungrammaticality if they intervene between the smaller-than-KP argument and the verb. The hallmark of syntactic operations is their sensitivity to hierarchical order, rather than linear order. That head-head adjacency displayed both by PNI objects and *in situ* subjects is sensitive to surface linear adjacency indicates that this adjacency is not checked at a point in the derivation when syntactic structure is relevant.

Recall first the relevant data from PNI – derived adjacency – presented in Section 3.2.1. In addition to PNI objects generated in Compl-V⁰, PNI objects generated in Spec-VP must, nevertheless, display head-head adjacency. Such adjacency must be derived by moving intervening elements out of the way. When a resultative phrase intervenes between the PNI object and the verb, ungrammaticality arises (2).

(2) **In situ intervention blocks PNI** (Baker 2014).

a. *Sakha*

- (i) *Misha (serenen) **kumaaqy** xoruopka-qa uk-ta
M.NOM (carefully) **paper** case-DAT put-PST.3SS
'Misha put a paper/papers in the case (carefully).'
- (ii) *Bu **oqo** djolloox oŋor-or
this **child** happy make-AOR.3SS
'This makes a child/children happy.'

b. *Tamil*

- (i) *Baala **pustagam** meese kii|e va-kkir-aan
B.NOM **book** table under put-PRS-3MS
'Bala puts book(s) under the table.'
- (ii) *Adu **paviolationam** peris-aa aakkar-itu
it **fruit** big-ADV make.PRS-3NS
'It makes fruit big.'

The ungrammaticality of the prepositional resultative examples in (2ai) and (2bi) can be ameliorated by moving the intervening goal argument out of the way. As noted in Chapter 3, adjectival resultative phrases cannot undergo the movement necessary to facilitate head-head adjacency.

(3) **Derived adjacency** (Baker 2014).

a. *Sakha*

- Misha serenen **xoruopka-qa** *kumaaqy uk-ta*
M.NOM carefully **case-DAT** *paper put.PST.3SS*
'Misha carefully put a paper/papers in the case.'

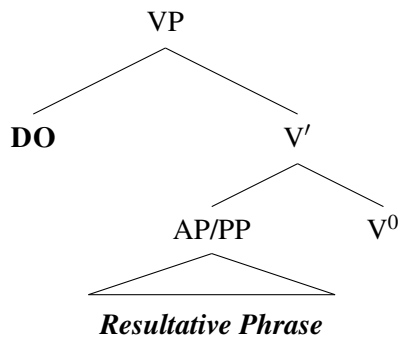
b. *Tamil*

Baala **petti ulle** *paviolationam va-kkir-avan*
 B.NOM **box in** *fruit* *put-PRS-PTPL-3SS*
 ‘Bala is the one who puts fruit(s) in (the) box(es).’

The contrast illustrated in (2) and (3) demonstrates that the distribution of PNI objects in these constructions cannot be reduced to a condition on the base-position of NPs. Bare NPs can occur as objects in both simple transitives and transitives containing resultatives. The condition that the bare NP be realized immediately adjacent to the verb is independently required. This second condition may be vacuously satisfied if the base-position of the bare NP feeds adjacency with the verb, but can also be satisfied by creating adjacency by means of removing potential interveners.

Resultative phrases are generated as complement to the verb (e.g. Larson 1988, Baker 2014, Bruening 2014). Consequently, the direct object is generated in Spec-VP, as in (4). (See Section 3.2 for arguments in favor of this model.)

(4) *Modelling resultative phrases*



The role of surface linear adjacency is immediately clear. The resultative phrase, generated lower in the clause than the PNI object, intervenes. Linear order, not hierarchical order, is relevant in determining the licit positions of PNI objects, suggesting that head-head adjacency can only be evaluated after linear order is established. This sensitivity to linear order is atypical for syntactic operations, and more typical for morphological operations (see Chomsky 1995 for the suggestion that all operations that are computed on linear order are extra-syntactic). Under common assumptions concerning where linearization is determined in the course of the derivation, I take this behavior to indicate that head-head adjacency in PNI objects is checked post-syntactically.

Illicit intervention by hierarchically lower elements is attested with *in situ* subjects, as well. Recall the so-called ‘definiteness effect’ displayed by Balinese subjects. Certain definite nominals are disallowed as *in situ* subjects. Specifically, definite descriptions which are marked with the head-final definite suffix *-e* and/or overt determiners like *ento* ‘that’ are illicit.

(5) **Definite descriptions are barred as *in situ* subjects.** (Wechsler & Arka 1998)

I Wayan gugut cicing / *cicing-e (ento)
ART W. OV.bite dog *dog-DEF (that)
'A/*that dog bit Wayan'

Crucially, there is not a categorical ban placed on semantically definite nominals as *in situ* subjects. The key factor in determining the well-formedness of *in situ* subjects is head-head adjacency. Some definite DPs – pronouns and proper names – can surface as *in situ* subjects, suggesting that this definiteness effect is not like semantically based definiteness effects found in English *there*-existentials and related constructions.

(6) **Definite *in situ* subjects**

- a. Be-e daar ida
fish-DEF OV.eat 3
'(S)he ate the fish.'
- b. Be-e daar Nyoman
be-DEF OV.eat N.
'Nyoman ate the fish.'

Recall from Chapter 3 that the definite nominals which can surface as *in situ* subjects behave like other nominals in this position, displaying the same linear adjacency requirement with the verb; adverbs cannot licitly intervene between definite *in situ* subjects and the verb, and definite *in situ* subjects cannot be fronted for the purposes of topicalization. This common behavior indicates that it is not something about indefinite *in situ* subjects that triggers the head-head adjacency requirement, but rather something more general about any well-formed nominal in that position. The well-formedness of pronouns and proper names as *in situ* subjects, while other definite elements are not, follows from the fact that pronouns and proper names are unique among DPs in lacking intervening NP material to the left of the head of DP, which is always realized in the rightmost position within the nominal. No material can intervene between them and the verb. As with PNI objects, the representation relevant to evaluating the head-head adjacency of *in situ* subjects is one of linear order. Material (the NP) that is hierarchically lower than D^0 (the definite suffix) but linearly precedes it intervenes to disrupt head-head adjacency, trigger ungrammaticality. As was noted above, similar effects cannot be tested in Malagasy, because Malagasy is verb-initial and consistently noun-initial. These two aspects of phrase structure ensure that the highest nominal head will always be closest to the verb. There is no chance for hierarchically lower elements to intervene.

The sensitivity of adjacency between Caseless arguments and the verb to linear order, both with PNI objects and with *in-situ* subjects, provides strong evidence that these phenomena should be captured with a mechanism that operates on linear order.

4.1.2 Constituent integrity

A second argument in favor of the position that the head-head adjacency introduced above should receive a uniform, post-syntactic treatment comes from the observation that the adjacency patterns of Caseless arguments do not break the nominal's constituent structure. Both PNI objects and *in situ* subjects share, in addition to a surface linear head-head adjacency requirement with the verb, the characteristic of *constituent integrity*. The word order of the noun phrase, NP or DP, cannot be altered to form a head-head adjacency compliant string. In this regard, they are distinct from instances of Noun Incorporation (NI), which permit word order alternations to achieve adjunction.

Morphological Noun Incorporation yields head-head adjacency between a verb and a noun. The literature provides much evidence that points to the view that NI operates on syntactic structure. For example, note that the stranding of elements that modify the incorporated nominal is possible in Ojibwe (7). Example (7a) shows stranding of a demonstrative. (7b) shows stranding of a possessor.

(7) *NI permits stranding of nominal elements* (Barrie & Mathieu 2014)

- a. N-gii-bimoom-aawazo-e **maaba**
1-PST-along.carry.on.back-child-VAI **this**
'I carried this child (on my back).'
- b. N-gii-bimoom-aawazo-e **Zhaabdiis**
1-PST-along.carry.on.back-child-VAI **John**
'I carried John's child (on my back).'

This suggests that NI operates on syntactic structure, because stranding creates a non-local dependency (Baker 1988, 1996). Other elements that can be stranded include adjectives (8) and numerals (9).

(8) *Mohawk adjective stranding* (Baker 1996)

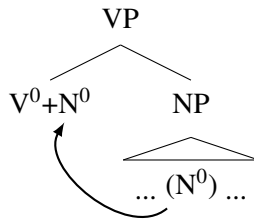
Aséhtsi ʌ-ye-nakt-a-núhwe?-ne?
new FUT-3SS/3O-bed-LNK-like-PUNC
'She will like the new bed.'

(9) *West Greenlandic number stranding* (Sadock 1980)

Ataatsi-nik qamute-qar-poq
one-INS.PL car-have-IND.3SS
'He has one car.'

The common account of the derivation of NI constructions is that they arise by Head Movement (Baker 1988, *et seq.*). The diagram in (10) schematizes this derivation.

(10) *Noun Incorporation schema* (Baker 1988 *et seq.*)



The discontinuous dependencies seen in (7-9) are immediately captured on this analysis of NI. Head-head adjacency between the nominal element and the verbal element is achieved by Head Movement, which separates the nominal head from any other elements within the noun phrase. The canonical shape of the nominal is altered by head movement, breaking up the expected constituent structure. If the head-head adjacency effects discussed in this chapter were to be captured in a similar manner, it would be expected that they too should show discontinuous dependencies. However, in both PNI objects and *in situ* subjects, discontinuous dependencies are not attested. The KP-less nominal displays constituent integrity. The noun phrase cannot be broken up, suggesting that head-head adjacency is not achieved via Head Movement.

First consider the behavior of adverb intervention in Balinese. The placement of sentential adverbs is extremely free, but cannot separate the verb from the *in situ* subject. The data are repeated here:

(11) *Adverbs cannot disrupt OV verb-subject adjacency.*

- a. *Sanget-sanget* gamelan-e depak ia
very-very gamelan-DEF OV.hit 3
- b. Gamelan-e *sanget-sanget* depak ia
gamelan-DEF *very-very* OV.hit 3
- c. *Gamelan-e depak *sanget-sanget* ia
gamelan-DEF OV.hit *very-very* 3
- d. Gamelan-e depak ia *sanget-sanget*
gamelan-DEF OV.hit 3 *very-very*
‘(S)he was hitting the gamelan really hard.’

Under a Head Movement account of the Balinese *in situ* subject head-head adjacency effect, the facts in (11) arise because the noun and the verb have adjoined as in (10). No adverb should intervene, because no adverb can adjoin to the verb. However, as noted by Arka (2004) arguing against Clynes’ (1995) NI analysis of the Balinese data, such an account would also predict that Head Movement should strand the modifiers of an *in situ* subject. A NI account of (11) predicts that the head noun and its modifiers could be broken up by an intervening adverb, contrary to fact.

(12) *Modified in situ subjects are a syntactic constituent* (Arka 2004).

- a. Ia alih dagang (***ibi**) celeng uli Badung
 3 OV.looked.for trader (*yesterday) pig from B.
 ‘A pig trader from Badung look for him/her.’
- b. Ia ngipi uber macang (***ibi**) ajak lalipi gede
 3 dream OV.chase tiger (*yesterday) and snake big
 ‘He dreamt of being chased by a tiger and a big snake.’

The temporal adverb *ibi* ‘yesterday’ cannot intervene between the head noun and its modifiers. No discontinuous dependency is created, suggesting that Head Movement of the noun has not occurred.

Similarly, a Head Movement account of head-head adjacency would predict the stranding of NP-complements. Balinese and Malagasy permit DP *in situ* subjects. These subjects are, nevertheless, subject to the head-head adjacency requirement. This requirement explained the unusual restriction on Balinese *in situ* subjects. Definite descriptions are not permitted; pronouns and proper names are, as are indefinites. The data are repeated below.

(13) *Balinese in situ subjects can't be definite descriptions*

- *I Wayan gugut **cicing-e**
 ART W. OV.bite **dog-DEF**
 ‘The dog bit Wayan’

(14) *Balinese in situ subjects can be definite*

- Be-e daar **ida / Nyoman**
 fish-DEF OV.eat **3 N.**
 ‘(S)he /Nyoman ate the fish.’

This pattern is unusual, because in other environments (e.g. Differential Object Marking) definite descriptions pattern either with pronouns/proper names or indefinites, but not to the exclusion of both. The grouping of indefinites with pronouns and proper names forms a non-natural class, whose behavior is, nevertheless, captured under a head-head adjacency requirement. Ignoring for the moment that D^0 -incorporation is unexpected in NI, a Head Movement account of the ungrammaticality of (13) would proceed as follows: (13) is ungrammatical because verb- D^0 adjacency formed in the syntax is not represented in the string. If the D^0 undergoes Head Movement with the verb, it should be realized to the left of the NP, creating a non-local dependency and disrupting the normal NP-D word order. The predicted word order is, however, ungrammatical, regardless of what side of the verb D^0 is realized on.

(15) *Balinese NP intervention*

- a. *I Wayan gugut **e cicing**
 ART W. OV.bite **DEF dog**
 ‘The dog bit Wayan’

- b. *I Wayan e gugut cicing
 ART W. DEF OV.bite dog
 ‘The dog bit Wayan’

The ungrammaticality of (15), suggests that Head Movement is not at play in creating head-head adjacency between the KP-less nominal head and the verb. The attested pattern of adjacency does not disrupt the constituency within the nominal, contrary to the stranding effect of Head Movement.

The same effect can be found in PNI environments. The head-head adjacency requirement of PNI also requires constituent integrity. Recall the examples of derived adjacency, repeated below:

(16) *Derived adjacency* (Baker 2014).

- a. Misha serenen **xoruopka-qa** kumaaqy uk-ta
 M.NOM carefully **case-DAT** paper put.PST.3SS
 ‘Misha carefully put a paper/papers in the case.’
- b. Baala **petti ulle** paviolationam va-kkir-avan
 B.NOM **box in** fruit put-PRS-PTPL-3SS
 ‘Bala is the one who puts fruit(s) in (the) box(es).’

Such examples were contrasted with constructions in which the oblique element was realized between the KP-less nominal and the verb.

(17) *Intervening resultatives trigger ungrammaticality* (Baker 2014).

- a. *Misha serenen kumaaqy **xoruopka-qa** uk-ta
 M.NOM carefully paper **case-DAT** put.PST.3SS
 ‘Misha carefully put a paper/papers in the case.’
- b. *Baala paviolationam **petti ulle** va-kkir-avan
 B.NOM fruit **box in** put-PRS-PTPL-3SS
 ‘Bala is the one who puts fruit(s) in (the) box(es).’

A Head Movement analysis of these facts would proceed as follows: the PNI object undergoes Head Movement, adjoining to the verb (see Baker & Hale (1990) and Baker (1996) for discussion of NI from non-complement, VP-internal positions). This ensures the head-head adjacency in (16). Ungrammaticality arises in (17), because Head Movement has not applied (or is not properly represented). Here too, the Head Movement account makes a similar prediction for modifier stranding. It should be possible for a modifier of the Caseless object to be stranded to the left of the resultative, while the head noun of the clause is realized adjacent to the verb. This word order is ungrammatical, contrary to the prediction. PNI does not strand modifiers. This observation was, in part, the impetus for Massam (2001) to argue against an NI account of Niuean PNI.

(18) *PNI doesn't strand modifiers*

- a. *Misha serenen saharxaj **xoruopka-qa** *sibekki uk-ta*
M.NOM carefully yellow **case-DAT** *flower put.PST.3SS*
'Misha carefully put a yellow flower in the case.'
- b. *Baala nalla **petti ulle** *pavolationam va-kkir-avan*
B.NOM good **box in** *fruit put-PRS-PTPL-3SS*
'Bala is the one who puts fruit(s) in (the) box(es).'

Instead, the PNI object displays constituent integrity. Head-head adjacency does not yield a discontinuous dependency. Constituent integrity is a second common property displayed by the head-head adjacency requirements of PNI objects and *in situ* subjects.

I take these facts to indicate that both instances of head-head adjacency the adjacency relationship developed between the nominal and the verb is not formed via dislocation of a syntactic constituent or sub-constituent within the syntax or even at that part of PF where syntactic structure is relevant. If the adjacency relationship is computed post-syntactically on linear order, we immediately capture constituent integrity. Throughout the entire syntactic derivation the Caseless nominal is a constituent. Only post-syntactically, at PF, is the head-head adjacency relationship checked. Only when it is satisfied, does grammaticality arise.

Given the common properties of the head-head adjacency patterns displayed by PNI objects and *in situ* subjects, I conclude that the two should be accorded the same analysis. Both display head-head adjacency with the verb; crucially, in both environments, head-head adjacency appears to be evaluated post-syntactically, after linear order is established. In this section, I provided two arguments to this end. First, it was observed that in both environments head-head adjacency must be defined in linear terms, because elements that do not intervene in the syntactic structure, due to a hierarchically lower position, but do intervene in the linear order can disrupt head-head adjacency. Relatedly, we observed that head-head adjacency did not break up the constituent structure of the KP-less nominal; discontinuous dependencies are unattested in these constructions. This is unexpected if adjacency is checked in the syntax, but is expected if adjacency is checked post-syntactically. These observations distinguish the head-head adjacency relationships identified in Chapter 3 from other instances of head-head adjacency, like Noun Incorporation (Baker 1988 *et seq.* and Lowering (e.g. Bobaljik 1995), that operate on hierarchical structure.

In the next section, I demonstrate how the head-head adjacency, evaluated upon linearly ordered strings, can be modeled as an adjunction operation.

4.2 Modeling post-syntactic head-head adjacency

As mentioned above, not all structures and strings are the result of operations that occur exclusively in the syntactic component of the grammar; this observation stems from a body of prior research investigating the relationship between syntactic structure and phonological form. For example, the relative ordering of clitics

within a clitic cluster does not follow from syntactic principles (see e.g. Perlmutter 1971, Bonet 1991). It has also been long held that syntactic movement cannot be responsible for explaining the inflectional system of English. English main verbs do not move to T^0 in the syntactic derivation (Emonds 1978, Pollock 1989). Nevertheless tense morphology appears on the verb. To capture such mismatches between the underlying syntactic structure and pronounced strings, a number of proposals have been offered, which converge on the same underlying principle: PF manipulates the output of syntax, resolving morphophonological requirements according to its own principles. One group of operations employed to resolve such mismatches falls under the heading of Morphological Merger (e.g. Marantz 1984, 1988; Embick & Noyer 2001). These are adjunction operations that take place at PF.

In this section, I demonstrate that (a form of) Morphological Merger should be used to model the head-head adjacency relationship between smaller-than-KP nominals and the verb. For our purposes the relevant post-syntactic adjunction operation will be *Local Dislocation*, an adjunction operation that operates on previously established linear order (e.g. Embick & Noyer 2001, 2006). I first introduce the operation below, and extend it to the data from PNI objects and *in situ* subjects. I then provide some empirical evidence that the proposed operation does, in fact, occur.

4.2.1 Local Dislocation

Local Dislocation is adjunction under adjacency. Like other applications of adjunction, the operation combines two terminal nodes, creating a complex atomic head (Embick & Noyer 2001, 2006, Embick 2007). Crucially, the terminal nodes to be combined must be *linearly adjacent*. The operation is schematized in (19), where $\alpha \bullet \beta$ denotes a requirement that α must linearly precede and be adjacent to β .

(19) *Local Dislocation schema*

$$X \bullet Y \rightarrow X+Y \text{ or } Y+X$$

As the schema in (19) indicates, adjunction may or may not affect the order of the two elements. As Embick (2007) stresses, Local Dislocation always involves adjunction. It may further involve a re-ordering of the adjoined elements, but there are constraints (which will be discussed below) on when such re-ordering may take place.

Of course, the most easily detectable instances of Local Dislocation are those that involve a reversal in order. A well known example of Local Dislocation that illustrates this property is the behavior of the Latin enclitic coordinator *-que* ‘and’, which attaches to the the second conjunct’s first word, whatever its lexical category. This pattern is seen clearly in cases in which the second conjunct is phrasal.

(20) *-que* always targets the first word of the second conjunct (Embick 2007)

- a. Cum [hac et praetoria cohorte caetratorum] [barbaris-**que**
with this.ABL and official.ABL escort.ABL caetratus.GEN.PL barbarian.ABL.PL-AND
equitibus paucis]
cavalry.ABL.PL few.ABL.PL
'with these and his official retinue of lightly-armed troops and a few barbarian cavalymen'
- b. ... [maius-**que** commodum ex otio meo quam ex aliorum
more-AND profit from idleness-ABL my-ABL than from others-GEN.PL
negotiis rei publicae venturum
work-ABL.PL thing-DAT public-DAT come-FUT.PRT
'... and more profit will come to the republic from my idleness than from the activities of
others.'

As Embick & Noyer (2001) note, the underlying syntax would suggest that the coordination should appear outside of the second conjunct, but it does not. Rather, it appears *within* the second conjunct. Its surface position instantiates exactly the kind of syntax/pronunciation mismatch that morphological operations are concerned with capturing. This behavior of attachment is unlike what we would expect from 'true' syntactic operations. The process in question cannot be head-movement, because the elements hosting *-que* are not the syntactic heads of the conjuncts. Furthermore, such movement would have to be downward head movement, for the conjunction to be able to reach a position inside the second conjunct. Also, the position of *-que* cannot be captured under a phrasal movement analysis, because phrasal movement is held to be incapable of moving the "first word" of a conjunct. Nor should it be able to attach a moved phrase to a head. Rather, the distributional pattern of *-que* can be accounted for directly if attachment of *-que* occurs under linear adjacency. The first word of the second conjunct bears *-que*, no matter what that word is and no matter what syntactic configuration it may be in within its own XP. The defining characteristic of the Local Dislocation operation is that it must always be *local*; only adjacent elements can be re-ordered.

Other instances of Local Dislocation involve no re-ordering of the relevant elements. One example of string-vacuous Local Dislocation concerns the placement of English auxiliary clitics (21).

(21) *Leaning of English auxiliaries*

- a. [[John] [is [going to the store]]]. → [[John's] [going to the store]].
- b. [[Coppe's favorite rapper] [will [eat a pickle]]]. → [[Coppe's favorite rapper'll] [eat a pickle]].

The auxiliary is syntactically and semantically associated with the following VP, but affixes phonologically to the last word of the subject KP. Similar behavior is also attested in the cliticization of determiners and case/preposition-markers in Kwak'wala. Such elements are syntactically and semantically associated with the following nominals, but phonologically associated with the preceding element.

(22) *Leaning in Kwak'wala* (Anderson 1984).

Kw'ixʔ=**ida** bəwanəma=**x=a** q'asa=**s=is** t'əlwagwayu
 clubbed=**the** man=**OBJ=the** otter=**INST=his** club
 'The man clubbed the otter with his club.'

The determiners (and case-marking if it is present) of the nominals 'man', 'otter', and 'club' are all realized as clitics on the preceding element, regardless of its syntactic category, as indicated by word-level phonological patterns (Anderson 1984, 1992). Similar effects are also found in Yagua (Payne 1962) and Kugu Nghanhara (Klavans 1985). Also Yu (2015) demonstrates case prefixes in Samoan are phonologically associated with the preceding word. Most strikingly, absolutive case is realized as a high boundary tone on the preceding word.

Embick & Noyer (2001) formalize Local Dislocation as follows: A potential linearization of a hierarchical structure where X^0 takes YP as its complement, and where ZP is either a complement to Y^0 or an adjunct to YP would be as follows. (Again, $\alpha \bullet \beta$ denotes a requirement that α must linearly precede and be adjacent to β .)

(23) *A linearized string*

$[X \bullet [Z \bullet Y]]$

Here X must immediately precede $[Z \bullet Y]$ and Z must immediately precede Y . Individual affixes are permitted to stipulate whether they are prefixes or suffixes, for example, and the same goes for all nodes in the tree.

In the syntactic structure, Y is the head of the constituent that X takes as its complement. In the syntactic derivation, Y could raise to X ; likewise, post-syntactically, X could lower to Y . If head-head adjacency were enforced by either of these means, we would expect the creation of discontinuous dependencies. However, for Local Dislocation, the relevant structural relationship is that of linear order and adjacency. Local Dislocation can convert (23) into (24).

(24) *Adjunction after linearization*

$[X \bullet [Z \bullet Y]] \rightarrow [[Z^0 Z+X] \bullet Y]$

When Local Dislocation applies, it is the linear relation \bullet between two items that is replaced by one of adjunction, yielding two terminal nodes that are not just adjacent but atomic. In (24), X 's \bullet relation to $[Z \bullet Y]$ is replaced with a relationship of adjunction to the left-peripheral element of $[Z \bullet Y]$, which in this case is Z . (24) is held to be a legitimate structural alternation, because the remaining \bullet relation, between Z and Y is maintained. The atomic head Z^0 , consisting of Z and X , precedes Y and is adjacent to it.

Having established the operation of Local Dislocation as adjunction under adjacency, a question that remains concerns when Local Dislocation will result in re-ordering of the adjoined elements, as in the case

of Latin, and when Local Dislocation will not result in reordering, as in the cases of English and Kwak’wala. Local Dislocation without reordering is sometimes termed *Leaning*. Embick & Noyer (2001) provide a partial answer. Following Marantz (1988), they hold that if X is an element peripheral to some constituent C and X is the element that requires adjunction, X will not be able to invert with an element Y that is outside the constituent C (25b). Local Dislocation without reordering is, however, possible (25c).

(25) ***Cross-constituent Local Dislocation possibilities.***

- a. [... Y] • [_C X • Z]
- b. *[... X+Y] • [_C Z]
- c. [... Y+X] • [_C Z]

If the structure in (25a) is formed before Local Dislocation, X cannot vacate C to invert with Y (25b). If this hypothesized reordering took place, X would not obey its additional ordering requirement to be adjacent to Z. The patterns schematized in (25) should be reminiscent of the phenomenon of constituent integrity discussed in Section 4.1.2, there we saw that the heads of PNI objects and *in situ* subjects could not be reordered with respect to material outside of the nominal.

(25) should be contrasted with the derivation of (24). X can invert with Z, because it is *contained within* the constituent that X is originally peripheral in. When Local Dislocation applies within a domain, material outside the domain is irrelevant. For example, X may undergo Local Dislocation with Y within a specified domain, such that the cross-domain adjacency relationship between Z and X is violated; Z’s ordering relationship is established with respect to the entire domain, indicated by _D in (26).

(26) ***Linear adjacency requirements are domain specific***

$$Z \bullet \mid_D [_{XP} X \bullet Y \bullet W] \rightarrow Z \bullet \mid_D [_{XP} Y+X \bullet W]$$

On the other hand, string-vacuous (i.e. non-inverting) Local Dislocation is not subject to these same locality conditions. String-vacuous rebracketing is permitted. In (25c), X may vacate C that it was originally peripheral within, since it can maintain its previously established ordering relationship with Z. I will not attempt to provide a full account of the domains of Local Dislocation. Ideally, they would correspond to syntactic phases (see Embick & Noyer 2001, Embick 2007). However, I will posit that *nominals constitute one such domain*. Local Dislocation of a nominal head to a non-nominal head can only result in the rebracketing diagrammed in (25c), and not the order-altering operation diagrammed in (25b), because it is the nominal head that must be re-bracketed in order to obviate the proposed Case Filter, and it is the element in need of re-ordering which determines the relevant domain of Local Dislocation. Reordering the nominal element with the non-nominal element would yield a violation of the nominal-internal linearity requirements which is not tolerated.

To summarize, Local Dislocation is adjunction that is sensitive to the linear relations of adjacency and precedence. It is not sensitive to syntactic structure. It must always be *local*, and cannot skip any linearly

intervening elements. Only adjacent elements can be reordered by the operation. Such sensitivities are reminiscent of those shown by the smaller-than-KP nominals discussed above. Therefore, Local Dislocation is well-suited to model the adjacency effects discussed throughout Chapter 3. In the next section, I demonstrate how Local Dislocation can be employed to capture the adjacency effects of Caseless nominals.

4.2.2 Local Dislocation and KP-less nominals

Local Dislocation is an adjunction operation. It replaces an existing linear adjacency relationship with an adjunction relation, obligatorily yielding a head-head adjacency relationship. Crucially, because this operation takes place over linearly ordered elements, it will be sensitive to linear intervention regardless of hierarchical structure, and never yield discontinuous dependencies. Furthermore, as relations like specifier and complement are no longer accessible at this level of representation, it should apply equally to subjects and objects so long as adjacency is respected. In the Appendix, insensitivity to structural position is used to disambiguate the present account from Baker’s (2014) recently proposed alternative. For these reasons, modeling the attested strict, linear head-head adjacency as a special instance of Local Dislocation, which obviates the proposed Case Filter via adjunction, seems appropriate. In this section, I discuss how Local Dislocation affects the distribution of smaller-than-KP nominals

Assuming that nominals constitute a domain, we can schematize the Local Dislocation involved in the licensing of Caseless nominals, as in (27).

(27) *Caseless nominals adjoin to the verb under Local Dislocation*

$$[_{T/VP} \dots V^0] \bullet [_{DP/NP} D^0/N^0 \bullet (Adj/PP)] \text{ ☹} \rightarrow [_{T/VP} \dots V^0 + D^0/N^0] \text{ ☺} \bullet [_{DP/NP} (Adj/PP)]$$

If, after linearization, the highest nominal head within the KP-less nominal is linearly adjacent to the verb (or whatever complex head containing the verb has been formed via Head Movement), the adjacency relationship can be exchanged for one of adjunction, yielding a complex verbal head. The core consequence of adjunction by means of Local Dislocation is that the nominal head is re-bracketed with the verb, leaning on it to the exclusion of any other elements that may be contained within the noun phrase. In order to satisfy the linearity requirements of the nominal domain, the head must remain linearly adjacent to any other element within the domain. However, if any element within the nominal domain or outside the nominal domain should intervene between the verb/verbal complex and the nominal head, the requisite Local Dislocation will not be able to apply. Recall the case of intervening adverbs disrupting the adjunction of comparative and superlative morphology. The KP-less nominal head will still be subject to the proposed Case Filter, and will not satisfy it, yielding ungrammaticality. Below, I walk through a number of sample derivations to make the processes of adjunction and licensing clear.

In the simplest cases, the verb and nominal are base-generated in such a way that they will be head-adjacent when linearization occurs, allowing Local Dislocation to immediately go through. This is the case for canonical PNI objects in Sakha and Tamil. The data is repeated below.

(28) *Sakha and Tamil PNI* (Baker 2014)

a. *Sakha*

Masha turgennik **salamaat** sie-te
 M.NOM quickly **porridge** eat-PST.3S
 ‘Masha ate porridge quickly.’

b. *Tamil*

Maala veegamaa **pustagam** padi-cc-aa
 M.NOM quickly **book** read-PST-3.F.S
 ‘Mala read the book quickly.’

When the constructions in (28) are linearized the order in (29) is formed. N⁰ of the PNI object is linearly adjacent to the verb. Local Dislocation can then apply creating an adjunction structure.

(29) *Local Dislocation of a simplex PNI object*

$[_{NP} N^0] \bullet V^0 \rightarrow [_{V0} N+V]$

The same operation can take place with a Caseless DP PNI object. In such cases, it is D⁰ that undergoes Local Dislocation with the verb. Furthermore, when the entire VP fronts, in the case of Niuean PNI, the adjacency relationship of the verb and the noun within the VP will be unaffected. In its derived position, the Niuean PNI object will still be able to undergo Local Dislocation as in (29). Given the phrase structure of Niuean (and Tongan), the position of verb and PNI object will be the opposite of that in (29). This difference in position will not affect the application of Local Dislocation.

Similarly, once the verb has moved to T⁰ in Malagasy (and Balinese), the requisite word order will have been achieved so that Local Dislocation can apply to the *in situ* subject in examples such as (30).

(30) *Possible non-Pivot subjects in Malagasy*

- a. Vonoiko amin’ny antsy ny akoho
 OV.kill.1S with-DET knife DET chicken
 ‘I am killing the chickens with the knife.’
- b. Vonoin-dRamatoa amin’ny antsy ny akoho
 OV.kill-R. with-DET knife DET chicken
 ‘Ramatoa is killing the chickens with the knife.’
- c. Rakofana ny kopy ny tsaramaso
 OV.cover DET cup DET bean
 ‘The cup covered the beans.’

The application of Local Dislocation to KP-less DPs is schematized below.

(31) *Local Dislocation of a simplex in situ subject*

$[_{T_0} T+...+V] \bullet [_{DP} D^0 (\bullet NP)] \rightarrow [_{T_0} T+...+V+D]$

Crucially, because all that is necessary for Local Dislocation to apply is linear adjacency, we expect there to be no difference between subjects and objects. Structural distinctions that are employed to explain subject/object asymmetries in the syntax are not relevant once linear order has been established, ensuring that KP-less arguments in both positions can undergo Local Dislocation. This is, however, not to say that both subjects and objects can be licensed by Local Dislocation in a given language; as we will see, there are constraints on the base-generation of KP-less arguments. I account for these restrictions in Section 4.4, as limitations on where KP-less arguments can appear, not on which KP-less arguments can be licensed.

In the case of PNI objects and *in situ* subjects, ungrammaticality arises when adjectives (32) and adverbs (33) disrupt head-head adjacency.

(32) *Adjective intervention*

a. *Tongan*

*Na'e tō **ki'i** manioke 'a Sione
PST *plant* **small** *cassava* ABS S.
'Sione planted a small amount of cassava.'

b. *Balinese*

*Nyoman *gugut* **liu** *cicing*
N. OV.bite many dog
'Many dogs bit Nyoman.'

(33) *Adverb intervention*

a. *Sakha*

*Masha *salamaat* **türgennik** *sie-te*
M.NOM porridge quickly eat-PST.3S
'Masha ate the porridge quickly.'

b. *Malagasy*

*Nohanin'(a) **haingana** *ny gidro ny voankazo omaly*
PST.OV.eat quickly DET lemur DET fruit yesterday
'The lemur ate the fruit quickly yesterday.'

In both cases, the head of the KP-less nominal and the verb are no longer linearly adjacent. Local Dislocation cannot apply. If Local Dislocation cannot apply to license a KP-less argument via adjunction, the proposed Case Filter will be violated, yielding the attested ungrammaticality. Note too that because Local Dislocation operates on already established linear order, discontinuous dependencies will never be created. If the linear adjacency relationships that have already been established do not permit the application of Local Dislocation, the operation simply cannot apply.

However, we do expect modified Caseless nominals to be licensed via adjunction when the modifier does

not intervene. The modifier will be morphologically stranded by the nominal head, but because adjunction happens after linear order has been established this stranding will be string vacuous. As was observed throughout Chapter 3, such orders are attested. For instance, compare (32) to (34).

(34) *No adjective intervention*

a. *Tongan*

Na'e tō manioke ki'i 'a Sione
 PST *plant cassava* **small** ABS S.
 'Sione planted a small amount of cassava.'

b. *Balinese*

Nyoman gugut cicing liu
 N. OV.*bite dog* **many**
 'Many dogs bit Nyoman.'

When the adjective does not intervene, Local Dislocation applies, and the proposed Case Filter is obviated.

Movement that disrupts the linear adjacency necessary to feed Local Dislocation is also ungrammatical. Recall the data from Balinese (35).

(35) *Ā-movement disrupts adjacency*

a. **Anak cerik cen* be-e daar?
person small which fish-DEF OV.eat
 'Which boy ate the fish?'

b. **Cicing ia uber*
dog 3 OV.chase
 'A dog, it chased him/her.'

Both *wh*-movement (35a) and topicalization (35b) separate the KP-less *in situ* subject from the verb. In this position, Local Dislocation cannot apply, yielding ungrammaticality. Alternatively, we may understand these data as indicating that Caseless arguments cannot be subject to the movement operations in question. The position of PNI objects with respect to adverbs can also be seen in this regard.

I now turn to some more complex applications of Local Dislocation. First, consider the behavior of derived adjacency. In Sakha and Tamil, PNI objects that are generated in Spec-VP can only survive the derivation if the verbal complement is not realized in its base-position. When a resultative phrase intervenes between the PNI object and the verb, ungrammaticality arises (36).

(36) *In situ intervention blocks PNI* (Baker 2014).

a. *Sakha*

(i) *Misha (serenen) **kumaaqy** xoruopka-qa uk-ta
 M.NOM (carefully) **paper** case-DAT put-PST.3SS
 'Misha put a paper/papers in the case (carefully).'

- (ii) *Bu **oqo** djolloox oŋor-or
 this **child** happy make-AOR.3SS
 ‘This makes a child/children happy.’

b. *Tamil*

- (i) *Baala **pustagam** meese kii|e va-kkir-aan
 B.NOM **book** table under put-PRS-3MS
 ‘Bala puts book(s) under the table.’
- (ii) *Adu **pavolationam** peris-aa aakkar-itu
 it **fruit** big-ADV make.PRS-3NS
 ‘It makes fruit big.’

The ungrammaticality of the resultative PP examples in (36ai) and (36bi) can be ameliorated by moving the intervening PP out of the way.

(37) *Derived adjacency* (Baker 2014).

- a. Misha serenen **xoruopka-qa** kumaaqy uk-ta
 M.NOM carefully **case-DAT** paper put.PST.3SS
 ‘Misha carefully put a paper/papers in the case.’
- b. Baala **petti ulle** pavolationam va-kkir-avan
 B.NOM **box in** fruit put-PRS-PTPL-3SS
 ‘Bala is the one who puts fruit(s) in (the) box(es).’

The ungrammaticality of the examples in (36) is captured under the current account. The intervening resultative phrases do not permit the application of Local Dislocation of the Caseless nominal and the verb. A violation of the proposed Case Filter occurs. Movement of the resultative phrase yields grammatical strings, because movement renders the lower copy of the moved element invisible after linearization (e.g. Nunes 2004). In the absence of an intervening resultative, Local Dislocation can apply to the KP-less object, permitting licensing of the argument under adjunction with the verb.

The role (or lack thereof) of unpronounced elements is also attested in instances when the elements is unpronounced because it is null, not because it has moved. Recall, the ‘definiteness effect’ displayed by Balinese subjects. Definite descriptions marked with the definite suffix *-e* are illicit as *in situ* subjects.

(38) *Definite descriptions are barred as in situ subjects.* (Wechsler & Arka 1998)

- I Wayan gugut cicing / *cicing-e (ento)
 ART W. OV.bite dog *dog-DEF (that)
 ‘A/*that dog bit Wayan’

Above, I claimed that such examples are ungrammatical, because the NP disrupts the requisite adjacency between the verb and D^0 for Local Dislocation to apply. Nevertheless, there is not a categorical ban placed on definite nominals as *in situ* subjects. Definite DPs can surface as *in situ* subjects, so long as head-head adjacency is maintained. This requirement limits possible definite arguments to pronouns and proper names.

(39) *Definite in situ subjects*

- a. Be-e daar ida
fish-DEF OV.eat 3
'(S)he ate the fish.'
- b. Be-e daar Nyoman
be-DEF OV.eat N.
'Nyoman ate the fish.'

The definite nominals which can surface as *in situ* subjects behave like other nominals in this position, displaying the same linear adjacency requirement with the verb; adverbs cannot intervene between definite *in situ* subjects and the verb, nor can *in situ* subjects be fronted for the purposes of topicalization. In these cases, the NP does not intervene permitting the application of Local Dislocation.

What is of particular interest is the grammaticality of the indefinite subject in (38). As noted in Chapter 3, we have reason to believe that such elements are DPs (see e.g. Paul 2004, 2015 for a similar discussion for Malagasy). Balinese *in situ* subjects display scope variability (40).

(40) *Balinese in situ subjects display scope variability*

- a. Sabilang anak demen-in anak luh
every person OV.happy-APPL person female
'A woman liked everybody.' [$\exists > \forall; \forall > \exists$]
- b. Nyoman sing gugut cicing
N. NEG OV.bite dog
'A dog didn't bite Nyoman.' [$\exists > \neg; \neg > \exists$]

Unlike PNI objects which must take narrow scope with respect to scope bearing elements, Balinese (and Malagasy) indefinite subjects do not. Even if scope variability in (40a) can be attributed to interpretation of the direct object, note that scope variability with respect to negation (40b) is unexpected if the *in situ* subject is an NP and negation is base-generated above the base-position of the subject. This suggests that they are not NPs, but rather DPs with a null D^0 . Assuming a uniform placement for D^0 regardless of whether it is pronounced or not, we observe that when D^0 is overt it is not enough for N^0 to be verb-adjacent to license the nominal. However, when D^0 is null, it is enough for N^0 to be verb-adjacent to license the nominal. I suggest that null elements, like moved elements, do not factor into the application of Local Dislocation.³ For the purposes of Local Dislocation in (40) and elsewhere above, when D^0 is null the nominal is in effect an NP. However, for the purposes of semantics, the nominal is a DP, regardless of the overt pronunciation of D^0 , allowing the element to take wide scope.

Treating the Balinese 'definiteness effect' in this way captures why a non-natural class of arguments can appear as *in situ* subject. All and only those arguments in which the highest nominal head is adjacent to the

³ This point is implicitly made by Embick & Noyer (2001) who place Local Dislocation after Vocabulary Insertion. At that point of the derivation, only elements that have overt realization are expected to be relevant.

verbal complex are licensed. Specific aspects of Balinese phrase structure, specifically V^0 -to- T^0 movement and D^0 -finality, determine the licit nominals. Turning to Malagasy, it was observed that V^0 -initiality and D^0 -initiality conspire to allow the full range of *in situ* subjects. It is also expected that languages that are D^0 -final and do not have V^0 -to- T^0 movement should permit full nominals. This is the case in the Indonesian language Acehnese (Legate 2014), which permits the full range of *in situ* subjects in OV clauses, including definite descriptions (41).

(41) *Acehnese permits definite OV subjects* (Legate 2014)

Aneuk miet nyan akan ureueng inong nyan tingkue
 child small DEM will person female DEM carry.in.cloth
 ‘The woman will carry the child.’

The OV subject *ureueng inong nyan* ‘the woman’ includes the demonstrative *nyan*; similar elements are barred in Balinese. However, as (41) illustrates, given the position of the verb with respect to the *in situ* subject and auxiliary *akan* ‘will’, V^0 -to- T^0 movement has not occurred. As such, we expect the head-head adjacency requirement to be satisfied, because no DP-internal material will intervene.⁴

Lastly, I discuss possibilities regarding the licensing of coordinated nominals via Local Dislocation. Both PNI objects and *in situ* subjects can be coordinated, as in (42).

(42) *Caseless nominals can be coordinated*

a. *Niuean*

Ne kai **sipi mo e ika mitaki** a Sione
 PST eat chip COM ABS fish good ABS S.
 ‘Sione ate good fish and chips.’

b. *Balinese*

Ia ngipi uber **macang ajak lalipi gede**
 3 dream OV.chase tiger and snake big
 ‘He dreamt of being chased by a tiger and a big snake.’

⁴ A puzzle for the present analysis is that OV subjects in standard Indonesian are restricted to pronouns (e.g. Cole & Hermon 2005, Legate 2014), (i).

(i) *Indonesian in situ subject* (Cole & Hermon 2005)

- a. Anak itu kami hukum
 child that we OV.punish
 ‘We punished the child.’
- b. ??Anak itu bapak hukum
 child that father OV.punish
 ‘Father punished the child.’

No elements intervenes between the OV subject and the verb in (ib), but it is nevertheless degraded compared to the pronominal OV subject in (ia). I follow Legate (2014) in assuming that the source of the restriction in standard Indonesian is historical (cf. Wolff 1996).

In both cases in (42), only the first of the two conjuncts is realized adjacent to the verb. We might wonder why the non-adjacent conjunct does not trigger a Case Filter violation. This is not necessarily problematic. As Baker (2014) notes, coordination structures may be multidimensional (e.g. Goodall 1987, Muadz 1991, Moltmann 1992), such that coordinated phrases of the form $[NP_1 \text{ and } NP_2 \text{ V}]$ are licit if and only if those of the form $[NP_1 \text{ V}]$ and $[NP_2 \text{ V}]$ are licit.⁵

In other environments, it is clear that the second conjunct is independently licensed. In the Niuean example in (42a), coordination is achieved via a comitative PP. The P^0 heading this PP assigns case to the second conjunct, as illustrated by the presence of the absolutive case marker *e* before the second conjunct. As such, the second conjunct is a full KP which satisfies the Case Filter independently. The comitative analysis can also be applied to Balinese (42b). The element *ajak* translated as ‘and’ above is better understood as a P^0 meaning ‘with’. An *ajak*-phrase can appear in places unexpected for a coordinator (43).

(43) *The coordinator ajak is a P⁰*

Tiang lakar numbas bawi-ne punika **ajak Ketut**
 I will SV.buy pig-DEF that **with K.**
 ‘I will buy the pig with Ketut.’

In this position, the behavior of *ajak* as a P^0 can be clearly seen. Just like the comitative PP in Niuean, the second conjunct in Balinese *in situ* subjects can be Case-licensed by the P^0 . It is not clear, however, that the PP analysis of coordination can be extended to all instances of coordinated Caseless nominals.

An issue I have alluded to, but have yet to address is how the application of Local Dislocation can be constrained. In PNI languages, arguments not introduced within VP cannot be licensed under adjacency with the verb even when the linear order of the language is such that Local Dislocation could apply. In a VSO language, like Niuean, the subject can never be Caseless even though it would be linearly adjacent to the clause-initial verb. Similarly, in Balinese and Malagasy, objects and those subjects that are also Pivots are never subject to head-head adjacency requirements, even though some acceptable word orders may place those arguments in verb-adjacent positions. I return to this issue in the next section, where the two environments in which head-head adjacency applies are contrasted. I leverage these contrasts to gain an understanding of how the languages in question come to employ Caseless nominals in the derivation, thereby constraining the very distribution of Caseless nominals.

Applying Local Dislocation to the licensing of Caseless PNI objects and *in situ* subjects allows us to straightforwardly capture a number of the properties of the distribution of these KP-less arguments. Local Dislocation is an adjunction operation that operates on linear order. This immediately explains why head-head adjacency should be sensitive to elements that intervene linearly, but not hierarchically. Also, as

⁵ This model would predict that both conjuncts would obey identical nominal-internal word order constraints. That is to say that if adjectives that can otherwise appear pre- or post-nominally must appear in a position to avoid disrupting head-head adjacency (as in Tongan and Balinese), *both* conjuncts should display this restriction, assuming that an KP cannot be coordinated with a smaller-than-KP nominal.

Local Dislocation between a nominal and non-nominal is Local Dislocation across a domain, we expect no discontinuous dependencies to be formed. Furthermore, the operation is computed after unpronounced elements are eliminated from the derivation explaining why elements that are null, whether by movement or simply realization, do not affect adjacency. Lastly, because local dislocation applies after linearization, the process should apply equally to subjects and objects so long as the arguments in question can be Caseless. Licensing via the adjunction operation of Local Dislocation only arises when the derivation conspires to ensure that Caseless nominal's head is linearly adjacent to the verb.⁶ Intervention of any element – either by base-generation or movement – disrupts adjacency, triggering a Case Filter violation. What remains to be answered is why adjunction should license a KP-less argument. I address this question in the next section. However, before concluding this section, I consider some ramifications for the proposed analysis.

4.2.3 Morphophonological ramifications of licensing by adjunction

Above, I suggested that Caseless arguments can be licensed by means of adjunction to the verb. Specifically, they can be licensed by adjunction under adjacency (i.e. Local Dislocation). In the case of PNI objects and Balinese and Malagasy *in situ* subjects, this adjunction happens quite late in the derivation, and is sensitive to linear order. Adjunction along the PF branch would not be expected to affect syntax or semantics. The ramifications for syntax and semantics that arise in these constructions can be attributed to the reduced nominal size of the KP-less arguments in question, and not to the operation that subsequently licenses them. However, we might expect to find morphophonological effects, arising from the adjunction of a nominal head to the verb. There is some preliminary evidence that such effects do exist. In this section, I discuss some effects that are attributable to adjunction of the KP-less nominal to the verb, supporting the present position that adjunction is crucial in obviating the proposed Case Filter.

Adjunction of a nominal to a verb, in the general case, is known to yield phonological effects. Consider Chukchi Noun Incorporation. I ignore some of the finer details of the phenomenon here.⁷ Chukchi has a dominant/recessive vowel harmony system. If the word contains a morpheme with a dominant vowel, /e, a, o/, then the vowels /i, e, u/ of recessive morphemes found anywhere in the word are altered to their dominant counterparts (e.g. Spencer 1995). Vowel harmony occurs across adjunction sites of Noun Incorporation:

(44) *Chukchi noun incorporation feeds vowel harmony* (Spencer 1995).

- a. ənan qaa-t qərir-ninet
he.ERG deer-ABS seek-3SS.3PO
'He looked for the reindeer.'
- b. ətlon qaa-rer-gʔe
he.ABS deer-look-3SS
'He looked for the reindeer.'

⁶ This does not necessarily require a derive-and-filter approach to syntactic computation. For instance, Bobaljik (1995) suggests that morphological requirements can dictate the application of syntactic operations. We could adopt a similar model here.

⁷ I thank Maria Polinsky for bringing this phenomenon to my attention.

(45) *Chukchi noun incorporation feeds vowel harmony* (Spencer 1995).

- a. ətləg-e mətqətmət kawkaw-ək *kili-nin*
father-ERG butter.ABS bread-LOC spread-3SS.3SO
'The father spread butter on the bread.'
- b. ətləg-ən kawkaw-ək mətqə-rkele-gʔe
father-ABS bread-LOC butter-spread-3SS
'The father spread butter on the bread.'

The dominant nominal roots *qaa* and *məltqə* are incorporated by recessive verb roots, triggering vowel harmony throughout the verb complex. Noun Incorporation involves adjunction of the nominal head, N^0 , to the verbal head; this complex is evidently considered a single 'word' for the purposes of phonological operations like Vowel Harmony.

Having proposed that PNI objects and Balinese and Malagasy *in situ* subjects are licensed by means of adjunction (albeit, adjunction at a later part of the derivation), we might expect to find similar phonological effects fed by this type of adjunction, as well. This is indeed the case. Malagasy *in situ* subjects show phonological evidence of adjunction and the formation of a single 'word' with the verb. This is especially evident when the external argument is a pronominal or proper name, in which case the two are written together as a single word and the complex is subject to clear phonological alternations, as in (46). This phenomenon is termed N-bonding in the Malagasy literature (e.g. Keenan 2000).

(46) *N-bonding* (Pearson 2005).

- a. *Vonoiko* [vono-in-ny + -ko] amin'ny antsy ny akoho
OV.kill.1S [kill-in-LNK -1S] with-DET knife DET chicken
'I am killing the chickens with the knife.'
- b. *Vonoin-dRamatoa* [vono-in-ny + Ramatoa] amin'ny antsy ny akoho
OV.kill-R. [kill-in-LNK R.] with-DET knife DET chicken
'Ramatoa is killing the chickens with the knife.'

The precise form of the resulting element depends on phonological form of the adjoined elements. If the verb is 'weak', ending in *-na*, *-ka*, *-tra*, or stressed on the antepenultimate syllable, the final syllable will be dropped or modified according to the form of the adjoined nominal (46a). If the verb is not 'weak', the segment *-n-* is inserted between it and a non-pronominal nominal. The resulting segment strings are then subject to phonological alternation (Keenan 2000). For example, notice, in (46b), that *vonoin(a)* and *Ramatoa* combine to form *vonoin-dRamatoa*; *n* and *r* combine to form the prenasalized retroflex plosive *ndr*. This phonological alternation is otherwise restricted to word-internal domains (Pearson 2005).⁸ Furthermore, the DP and its host behave as a unit for purposes of stress assignment. For example, when *àmonóana* 'OV.kill' merges with *ny mpambóly* 'the farmer', the primary stress on the verb is reduced to a secondary stress,

⁸ N-bonding can apply to other nominal elements. Possessors also display N-bonding phenomena. It is not clear if the adjunction analysis presented here can be extended to these environments. It is also possible that the adjunction operations which yield targets for N-bonding are diverse, but once achieved result in the same phonological alterations.

yielding *àmonðan'ny mpambóly*. The application of word-internal phonology across an adjunction site is entirely expected. The fact that Malagasy displays such effects exactly where the proposed analysis predicts them to occur is promising evidence that the proposed analysis is on the right track.

Of course, just because adjunction of a nominal to a verb can interact with phonological operations which hold of the resultant structure, does not mean such effects must hold. Baker (2014) observes that, in Tamil, PNI does not display the phonology of a compound.⁹ He reports that in colloquial Tamil nasals are deleted word finally, realized only as nasalization on the preceding vowel (47a). Crucially, this rule does not apply inside a compound. There, the nasal assimilates in place to a following stop, and the stop becomes voiced (47b). In this regard, PNI objects do not behave like they are compounds with the verb. A nasal at the end of the PNI object is treated as if it were word-final (deleting and affecting the vowel quality), not as if it were compound-internal (47c).

(47) ***PNI objects display word-final phonology*** (Baker 2014)

- a. Tamil words: nasal deletion word finally
maram ‘tree’ → *marõ*; *maram-aa* → *maramaa* ‘is it a tree’.
- b. Tamil compounds: nasal assimilation, voicing
maan ‘mango’ + *pazam* ‘fruit’ → *maambazõ* ‘mango fruit’
maan ‘mango’ + *kaa* ‘unripe fruit’ → *maangaa* ‘unripe mango’
- c. A PNI that ends in a nasal behaves like it is word final, not word medial
Maala veegamaa pustagam paði-cc-aa = [...gõpa...]
M.NOM quickly book read-PST-3FS **not**: [...gamba...]
‘Mala read a book quickly.’

These data should not raise doubt for the proposed analysis of head-head adjacency presented here. It is not surprising to find variation in behavior between compounds and elements that are formed via other adjunction processes. Indeed, a substantial part of the early literature on NI (e.g. Di Sciullo & Williams 1987; Baker 1988, 1996), is concerned with establishing that NI is not compounding. It may be the case that compounds are subject to distinct phonology, because compounding is a case of root-root merger in the lexicon (e.g. Baker 2003). Alternatively, even if compounds are formed in the syntax (e.g. Marantz 1997, Harley 2009), the phonological operations that apply to them may be different because of the size, type, and/or locus (first phase v. non-first phase)¹⁰ of each of the adjoined elements.

Word-internal phonological effects are expected if Local Dislocation can license nominals by means of adjunction. The resulting structure may be treated as a word for subsequent phonological operations in some cases, much as the resulting verbal complex in Chukchi Noun Incorporation, also formed by adjunction, is treated as a word for determining the domain of vowel harmony. The preliminary evidence from Malagasy N-bonding suggests that adjunction is, in fact, taking place when KP-less nominals are licensed under head-

⁹ Lidz (2006) makes a similar observation for Kannada.

¹⁰ I thank Omer Preminger for suggesting this final possibility.

head adjacency with the verb. In the next section, I explain why adjoining the highest head of a smaller-than-KP nominal to the verb, yielding head-head adjacency, is able to obviate the proposed Case Filter.

4.3 Adjunction obviates the proposed Case Filter

At the outset of this chapter, I briefly alluded to the proposal that I will adopt for why adjunction can obviate the proposed Case Filter, repeated in (48).

(48) ***Proposed Case Filter***

Noun Phrases must be KPs

The proposed Case Filter is a requirement on the size of nominal projections. I posited that this requirement can be overcome under adjunction with the verb, because the nominal projection is rendered non-nominal. Adjoining the highest nominal head to the verb, allows the nominal projection to become part of the verbal projection. Any requirements on the size of nominal projections, such as (48), are thus obviated.

In this section, I briefly describe a theory of extended projection and the requirements that the grammar can place on the size of projections to make clear why a requirement like (48) should exist and why the process of adjunction, be it Local Dislocation or otherwise, can obviate such requirements. It is not my goal here to provide a complete theory of extended projections. I leave that significantly large task to subsequent research. Rather, I hope to outline what an theory of extended projection would need to look like to encode requirements like the proposed Case Filter, and explain why adjunction can obviate these requirements.

In short, I propose that the requirement for nominal licensing – the proposed Case Filter (48)– can actually be attributed to a more general requirement in natural language for categories to be part of *complete extended projections*¹¹, as in (49).

(49) ***Condition on extended projection***

All categories must be part of a complete extended projection

I take the set of complete extended projections to be (at least): CPs, PPs and KPs. These phrases trivially comply with (49), and so are not expected to require licensing of any kind. In the context of Case Theory, this equates to the observation that PP and CP do not (normally) require licensing – Stowell’s (1981) *Case Resistance Principle*. Smaller-than-KP nominals violate (48) and, more generally, (49), because they are not

¹¹ A similar requirement has been independently motivated in recent work by Sheehan & Van der Wal (2015). They propose the principle EXTEND (i).

(i) ***Extend*** (Sheehan & Van der Wal 2015)

Each category must be part of a complete phase.

If CP, PP, KP, (and vP) are complete phases the two proposals come close to capturing the same requirements on nominal size. It remains to be seen if the two proposals can be disambiguated.

complete extended projections. They are not KPs. I now elaborate on how extended projections are formed and how they are determined to be complete.

4.3.1 Sketching a theory of extended projection

Any theory of extended projection needs to capture two core characteristics: (i) Lexical heads form larger (extended) projections with the functional heads that dominate them. (ii) The formation of such projections requires categorial identity between the lexical and functional heads. I follow Grimshaw (1991/2005) in my approach to capturing these aspects of extended projection (see e.g. Adger 2003 and Starke 2004 for related approaches).

Grimshaw suggests that categorial identity between lexical and functional heads is ensured by matching categorial features. That is to say that those functional heads that can combine with a lexical head of some category all bear a common feature, F . For instance, N^0 , D^0 , and K^0 all bear a nominal feature, while V^0 , T^0 , and C^0 all bear a verbal feature. Of course depending on the inventory of functional projections there may be many more functional heads in each category. (See e.g. Jackendoff 1977, Holmberg 1986, Reuland 1986, Abney 1987, Haeblerli 2001, Adger 2003, Starke 2004 for a number of specific proposals regarding such featural systems.) What distinguishes heads from one another for the purposes of extended projection is the value of the feature they bear. All nominal heads bear the same feature F , but the value of F differs between N^0 , D^0 , and K^0 . Lexical categories bear $F0$, the lowest level functional category bears $F1$, higher level functional categories bear $F2$ and so on. These features are said to be borne both by the functional head that introduces them and the immediate XP of that head. For instance both N^0 and NP bear $F0$.

With the requisite featural system in place, it is possible to define how lexical heads form extended projections with the functional heads that dominate them as follows (50).

(50) ***Defining extended projection*** (Grimshaw 2005)

YP is an extended projection of X iff"

- a. YP dominates X.
- b. The categorial features of YP and X are consistent.
- c. There is no inconsistency in the categorial features of any nodes N, where YP dominates N and N dominates X.

Grimshaw suggests that not only must all heads in an extended projection match in categorial features, they must instantiate a particular relationship between the values of the categorial feature in question – F -value:

(51) ***F-values within the extended projection*** (Grimshaw 2005)

YP is an extended projection of X iff the F -value of X is no higher than the F -value of YP.

(51) permits a head and complement of the same F -value to form an extended projection, additionally it allows for an increase in value greater than one. In other words a projection XP with an F -value of 0 could

be complement to a head with an F -value of 2 or 3 but does not allow for a decrease in F -value, permitting variability in syntactic architecture of projections within and across languages (*contra* e.g. Cinque 1999). If a lexical head takes a functional complement, the complement's extended projection will be halted.

A phrase can simultaneously be complement to a head and part of the same extended projection so long as the complement and head share categorial features. VP (or vP) is complement to T^0 and TP is complement to C^0 yet all are part of the same verbal extended projection because they share the same categorial feature, differing only in F -value. However, while KP is complement to V^0 it will not form an extended projection with it, because KP and V^0 differ in categorial features.

Having offered a sketch of how the grammar can identify extended projections. I turn to the question of how the grammar identifies *complete* extended projections. Put simply, a complete extended projection is an XP with the maximal F -value for the categorial feature in question. Grimshaw posits that universal grammar provides a set of possible functional categories, realized as a fixed F -value hierarchy, that a language might employ (see also Zwarts 1992, Chomsky 1995, Cinque 1999). We might imagine that every language employs every possible projection even if they contain no overt material (e.g. Cinque 1999), or that languages employ only a subset of the possible functional categories. The principles of extended projection offered in (50) and (51) ensure that since a head with a given F -value cannot take a head of the same category with a higher F -value as its complement the relative position of heads in the categorial hierarchy will be fixed, although the absolute position could vary. On this view, the maximal F -value for any categorial feature is encoded in Universal Grammar. A requirement like (52), can be enforced by ensuring that every extended projection as defined in (50) culminates in a functional head bearing the highest possible F -value for that extended projection.

(52) ***Condition on extended projection***

All categories must be part of a complete extended projection

If we maintain that K^0 is the highest functional head in the nominal extended projection, bearing the highest nominal F -value, we can be sure that full KPs will satisfy (52) and smaller-than-KP nominals will violate (52). The proposed Case Filter is simply a subcase of (52) addressing the form of nominals specifically. As I have suggested, adjunction (via Local Dislocation) obviates a nominal's requirement to be a KP. I now describe how adjunction of a nominal head to the verbal head can obviate (52).

4.3.2 Adjunction extends projections

Grimshaw's (2005) approach to extended projection provides a readymade account of why adjunction of the highest nominal head to the verbal head in cases of PNI and Caseless *in situ* subjects should be able to obviate the proposed Case Filter. Specifically, some heads can be categorially *neutral*. That is to say, they can form extended projections with heads bearing different categorial features. Heads that are neutral are able to form extended projection with heads of (at least) two categories, so long as the other requirements of

extended projection, as outlined above, are maintained. Grimshaw holds that if a head is neutral between two categories and its complement is a member of either category, an extended projection is formed. Similarly, if a complement is neutral between two categories and its head is a member of either categories, an extended projection is formed. The conditions on extended projection for category neutral elements still require that the F-value of the head is not less than that of the complement.

Grimshaw (2005) proposed category neutrality to account for apparent *mixed projections* in which a functional head of one category appears to take a complement of another category, forming an extended projection. Categorical features of an extended projection can switch from verbal to nominal and vice versa (e.g. Abney 1987, Borsley & Kornfilt 2000, Alexiadou 2001, Ackema & Neeleman 2004, Kornfilt & Whitman 2011). The most well-known instance of such categorial mismatches is probably gerunds in which a nominal complement is taken by a verbal functional head (e.g. Abney 1987). Grimshaw proposes that the head of the gerund *-ing* is a category neutral head, capable of combining with either verbal and nominal categories to form well-formed extended projections.

Adopting category neutrality offers an explanation for why adjunction licenses smaller-than-KP nominals. If adjunction forms a complex head, then we can be sure that adjunction of two heads of distinct categories will form a complex, category neutral head. The head will share the categorial specifications of the two combined heads. Thus, when a smaller-than-KP nominal adjoins to the verb a head that shares both verbal and nominal categorial features is formed, the complex XP that projects from this head is also category neutral. The complement of the category neutral head will be an licit part of the extended projection if it is either a verbal or nominal projection. Furthermore, if this category neutral projection is then taken as the complement of a head that is either verbal or nominal a licit extended projection will be formed. The smaller-than-KP nominal projection becomes part of the verbal projection. If the verbal projection successfully culminates in a complete extended projection, i.e. CP, (52) will be satisfied and the proposed Case Filter will be successfully obviated. Smaller-than-KP nominals are thus licensed without Case.

This proposed analyses captures why it is the *highest* nominal head that must adjoin to the verb. Only by adjoining the highest nominal head will the smaller-than-KP nominal be rendered category neutral and capable of obviating the proposed Case Filter. Similarly, the analysis accounts for why the nominal must adjoin to the verb, and not say another nominal internal category, only be adjoining to a nominal-external element can the nominal projection be extended and ultimately completed as part of the verbal projection. Adjoining the nominal head to some head within the nominal projection ensures that the nominal projection will never be completed, yielding ungrammaticality.

It should be noted that the proposal that obviating the Case Filter by means of adjunction is not new. Baker (1988 *et seq.*) employs such a in his analysis of Noun Incorporation, where he suggests that adjunction obviates the common Case Filter. Baker (1988) holds that case assignment is head-driven and, in some languages, limited to certain specifier-head configurations.¹² Nevertheless, in such languages, incorporation can stand in for movement to a Case-licensing position. In Southern Tiwa, clauses expressing intransitive

¹² See Chapters 1, 2 and 6 for some discussion of this model.

verbs of motion can be realized in two related ways (53).

(53) *Noun Incorporation obviates the Case Filter via adjunction* (Baker 1988)

- a. Seuan-ide \emptyset -wan-ban liora-de-'ay
man-SUF 3S-come-PST lady-SUF-IO
'The man came to the lady.'
- b. Am-seuan-wan-ban liora-n
3P-man-come-PST lady-PL
'The man came to the ladies.'

Baker (1988) notes that these sentences are essentially synonymous. Nevertheless, their surface structures are quite different. In (53a), the Theme 'man' is promoted to subject, and the Goal 'ladies' appears within a PP. In (53b), the Theme is incorporated, and the Goal is promoted to subject. Note the change in subject agreement morphology between the two examples; it is 3rd singular in (53a), but 3rd plural in (53b). As the verb is unaccusative, Baker holds that it assigns no Agent thematic role and no accusative Case, under Burzio's generalization (Burzio 1981). Nevertheless, both arguments are licensed. In (53a), the Theme moves to subject position receiving nominative case and triggering agreement. The Goal is licensed within the PP. However, when the Goal occupies subject position in (53b), there is no licenser for the Theme. Nevertheless, the Case Filter is obviated. The conclusion then is that the process of Noun Incorporation, adjunction of the nominal to the verb, itself, can license the nominal.

For Baker, Case is a means of rendering nominals 'visible' for θ -role assignment (e.g. Aoun 1979; Chomsky 1981, 1986). Case helps to identify how the nominal is to be interpreted in the structure. Baker suggests that Noun Incorporation may also be able to encode the intended interpretation of the nominal. Because Noun Incorporation is limited to certain arguments, complements of the verb, an incorporated nominal will have to have a certain structural relationship, and given the Uniformity of Theta Assignment Hypothesis (Baker 1985), a certain thematic relationship with the verb. As such, incorporating a nominal makes it 'visible' for the assignment of a θ -role, just as Case assignment does.

However, in Chapter 2, I argued that Case-feature valuation need not occur. This coupled with the observation that the proposed Case Filter can be obviated at PF suggests that the Visibility Hypothesis can not motivate case assignment. If nominals that do not value their Case-feature can receive a θ -role, Case-feature valuation cannot be seen a precursor for nominal interpretation. Furthermore, if nominals that lack Case, i.e. K^0 , can obviate the proposed Case Filter at PF, an LF Case Filter cannot be maintained. I briefly discuss the locus of the proposed Case Filter in section 4.5. However, we can adopt the current proposal to explain why NI also licenses smaller-than-KP nominals.

Adjunction operations that take place earlier in the derivation can also satisfy the proposed Case Filter as well. Like PNI objects and *in situ* subjects, adjunction of the nominal head to the verb in morphological Noun Incorporation constructions creates a category neutral projection which can be extended by the verbal projection. If the verbal projection is completed, the derivation can converge, licensing the smaller-than-KP

nominal. Like Baker's analysis, the present analysis unifies adjunction and Case. For Baker, both adjunction and the presence of Case (a Case-feature specification) ensure that a nominal will be interpreted at LF. For the present analysis, both adjunction and the presence of Case (K^0), ensure that a nominal will be part of a complete extended projection.

4.4 Constraining KP-lessness

So far, we have chiefly discussed the common properties shared by PNI objects and certain *in situ* subjects, building an analysis of their licensing based on their common properties. Both obey a linear head-head adjacency requirement with the verb, and display constituent integrity. As suggested above, these common properties arise, because, in both scenarios, the nominal which must be adjacent to the verb is Caseless; it lacks K^0 . Lacking a KP layer, the nominal cannot satisfy the proposed Case Filter, a subcase of the more general requirement that all extended projections be complete. However, under adjacency with the verb the proposed Case Filter can be obviated by adjoining the nominal head with the verb, rendering the smaller-than-KP nominal part of the verbal projection and invisible for proposed Case Filter evaluation.

As it stands, the proposed account is too strong. It predicts that Caseless arguments generated anywhere in the clause should be well-formed so long as they display head-head adjacency with the verb. Conversely, without conditions on merger of structurally reduced nominals, full KPs should be always be able to be merged in this place, immediately yielding derivations which comply with the proposed Case Filter. The analysis requires some mechanism whereby the distribution of Caseless arguments can be constrained to only those positions in which they are attested, and whereby the generation of Caseless nominals will be forced in the appropriate environments (e.g. *in situ* subjects). In this section, I address this need. There are two ways, broadly speaking, in which the application of Local Dislocation to Caseless nominals in PNI constructions could be constrained. (i) Local Dislocation itself may be limited to only apply in certain configurations. (ii) The base-position of structurally reduced nominals might be limited. I adopt the second position.

However, I suggest that we cannot arrive at a uniform account of how base-position of structurally reduced nominals is limited. PNI objects are base-generated as DPs/NPs, because the verb that c-selects them permits structurally reduced arguments. Caseless *in situ* subjects arrive at their KP-lessness quite differently. In this environment, KP-lessness is derived. I attribute the behavior of *in situ* subjects to the Subject *in situ* Generalization (Alexiadou & Anagnostopoulou 2001, 2006; Richards 2004, 2010). Though the arguments in question arrive at Caselessness by different means, they behave the same nonetheless with respect to satisfying their licensing requirements.

The reader may be dubious of the prospects of these competing accounts, and may, with reason, wonder if the two accounts of nominal Caselessness are one too many. There would appear to be a multiplicity which has the potential to be unified under another account. Nevertheless, there are reasons to believe that both approaches to generation of KP-less nominals is required. PNI objects display a certain amount of

cross-linguistic variability that lends itself to restriction by c-selection which, as noted above, is itself an idiosyncratic process. In different languages, the size of the reduced nominal can vary, as can the verbs which permit PNI. This is not the case in languages, investigated so far, which display an adjacency requirement between the verb and *in situ* subject. As Balinese and Malagasy illustrated, *in situ* subjects in both languages are DPs. Any element that can be hosted in the DP is well-formed within an *in situ* subject so long as the head-head adjacency requirement is maintained. If an idiosyncratic process like c-selection were at play we might expect to find additional restrictions on nominal size. To be fair, however, the sample size of languages which display head-head adjacency with *in situ* subjects is small. More research is needed to determine if other languages display this property and if they place additional constraints on nominal size.

Perhaps more convincingly, there are not idiosyncratic restrictions on the verbs whose *in situ* subjects display an adjacency requirement; the requirement holds amongst all transitive predicates. As Ball (2009) notes, specifically for Tongan, this is not the case for PNI constructions. This uniformity appears to suggest that specific verbs are not independently selecting for reduced arguments.

A final difference between the two environments also supports adopting different treatments for explaining how Caseless PNI objects and *in situ* subjects enter the derivation. As noted in Chapter 3, PNI alters case patterns. In Niuean, canonical transitives display an ergative-absolutive pattern, while PNI construction display a non-ergative pattern:

(54) *Niuean PNI* (Seiter 1980)

- a. Takafaga tūmau nī e ia e **tau ika**
 hunt always EMPH ERG he ABS PL **fish**
 ‘He is always hunting fish.’
- b. Takafaga **ika** tūmau nī a ia
 hunt **fish** always EMPH ABS he
 ‘He is always hunting fish.’

This alternation was explained as a result of the PNI object being structurally reduced. If ergative case can only be assigned when another argument receives structural absolutive case, the non-ergative pattern is achieved, because the PNI object cannot receive case morphology due to its smaller-than-KP status. In PNI constructions, there is only one KP capable of receiving case and that argument will receive absolutive. However, case patterns are not affected by *in situ* subjects being structurally reduced. Recall from Chapter 2 that Austronesian Voice reflects the case of the argument promoted to Pivot (e.g. Chung 1994, 1998; Richards 2000; Pearson 2001, 2005; Rackowski 2002; Rackowski & Richards 2005). In a language like Malagasy (55), Subject Voice reflects agreement with nominative case-marked arguments, Object Voice reflects agreement with accusative case-marked arguments, and Oblique Voice reflects agreement with lexical case-marked arguments (e.g. Pearson 2001, 2005).

(55) *Malagasy Voice system* (Pearson 2001).

- a. Nametraka ny boky teo ambonin'ny latabatra ny vehivavy
 PST-SV.put DET book PST-there on.top-DET table DET woman
 'The woman put the books on the table.'
- b. Napetran'ny vehivavy teo ambonin'ny latabatra ny boky
 PST-OV.put-DET woman PST-there on.top-DET table DET book
 'The books, the woman put (them) on the table.'
- c. Nametrahan'ny vehivavy ny boky ny latabatra
 PST-OBLV.put-DET woman DET book DET table
 'The table, the woman put the books (on it).'

As noted above, accusative case is also dependent on the presence of another structural case-marked argument in the clause (e.g. Marantz 1991; McFadden 2004; Bobaljik 2008; Baker & Vinokurova 2010; Preminger 2011, 2014). I adopt this position here, and defend it in Chapter 6. If the *in situ* subject in (55b), entered the derivation as a DP, we would not expect accusative case to be assigned to the object. If accusative case is not assigned to the object, it should be realized with the unmarked (nominative) case, and should trigger the same case agreement morphology as is found in Subject Voice (55a). That object Pivots and subject Pivots trigger different case agreement morphology suggests that *in situ* subjects do not enter the derivation smaller than KP. Rather, it suggests that they become smaller than KP at some point in the derivation after [*uCase*] values have been determined.

I take these points of variation between the two instances of Caselessness as supporting the view that PNI objects and *in situ* subjects arrive at Caselessness differently. The former are base-generated as KP-less arguments. The latter enter the derivation as KPs, able to participate in case assignment operations, but become KP-less during the course of the derivation. Once these arguments are Caseless, they are afforded the same means of satisfying the Case Filter, namely licensing via Local Dislocation.

4.4.1 Constraining PNI objects

As we observed in Section 3.1, PNI objects are structurally reduced. They cannot contain the same material as full KPs. To review this point, recall the data from Niuean. PNI objects cannot include indicative relative clauses (56a), case markers (56b), number markers (56c) or possessors (56d) (Massam 2001). Furthermore, they cannot be pronouns or proper names (57).

(56) *PNI nominals must be NPs* (Massam 2001).

- a. *Ne inu kofe **ne taute e au** a Sione
 PST drink coffee N.FUT make ERG I ABS S.
 ('Sione drank coffee that I made.')
- b. *Ne inu **e** kofe kona a Mele
 PST drink ABS coffee bitter ABS M.
 ('Mele drank the bitter coffee.')

- c. *Kua holoholo **tau** kapiniu a Mele
PRF wash PL dishes ABS M.
(‘Mele washes the dishes.’)
- d. *Ne vali fale **ha** Mele a Sione
PST paint house GEN M. ABS S.
(‘Sione paints Mele’s house.’)

(57) *PNI nominals cannot be pronouns or proper names* (Clemens 2014).

- a. *Kua onoono **au** mai a ia.
PRF look.at 1S DIR ABS 3S
‘He looked at me.’
- b. *Kua onoono **Sione** mai a ia.
PRF look.at S. DIR ABS 3S
‘He looked at Sione.’

On the assumption that (some) relative clauses, possessors, case and number morphology are all hosted above NP, the inability of nominals containing such elements to undergo PNI indicates that a diminished nominal complement is implicated in the formation of PNI constructions. Similarly, if pronouns and proper names must occupy D^0 , either by movement or base-generation (e.g. Postal 1969, Longobardi 1994, Elbourne 2001), their inability to undergo PNI confirms the restriction to NP objects in Niuean PNI. As discussed above, the exact amount of structural reduction appears to vary cross-linguistically. Regardless of the size of reduced nominals, we can be sure that PNI objects are not full KPs.

All the PNI data discussed above demonstrated PNI of objects of agentive predicates. Other arguments can also undergo PNI. In addition to canonical objects, ‘middle objects’ and instrumental arguments can also undergo PNI in Niuean.¹³ Example (58) shows PNI of what is known as a middle object, following Chung (1978). Verbs that select middle objects are psych and perception verbs.¹⁴ Middle objects are marked with the same case as goal arguments, shown in (50) below.

(58) *Middle object PNI* (Clemens 2014)

- a. Kua onoono mai a ia ke he tama
PRF look.at DIR ABS 3.SG GL LOC child
‘He looked at the child.’

¹³ Another PNI construction, existential PNI, is also attested (Seiter 1980, Massam 2001). Existential PNI differs from other types of PNI. For instance, it only occurs with the verbs *muhu* ‘have plenty/be plentiful’ and *fai* ‘have/be’. PNI is obligatory with *muhu*, and optional with *fai*. Though optionality is affected by interpretation (Clemens 2014). PNI with *fai* is obligatory with the ‘have/be’ interpretation and optional with a ‘make’ interpretation (Massam 2001). Unlike the PNI discussed here, existential PNI can occur when there is only one argument in the clause (Sperlich 1997, Massam 2001, Clemens 2014; cf. Seiter 1980). I do not address this construction here.

¹⁴ Not all verbs with the semantics of psych/perception verbs take middle objects, and some verbs can take a either and middle or absolutive object. This variability depends on whether the action described by the verb has an “observable effect” on the object (Seiter 1980). If it does, the absolutive construction is preferred.

- b. Kua onoono tama mai a ia
 PRF look.at child DIR ABS 3.SG
 ‘He looked at the child.’

Despite differences in case morphology, the PNI version of the middle construction (58b) displays the same behavior as canonical PNI constructions: the object cannot host DP-level material, the object must be adjacent to the verb, and the subject bears absolutive case. Middle objects are direct objects of the verb, regardless of differences in case alignment (Chung 1978; cf. Seiter 1980, Massam 2001). In fact, it is quite common cross-linguistically for case alignments to be altered in psych and perception verb constructions (e.g. Landau 2010). This may be because the subjects of (certain classes of) psych and perception verbs are introduced in a different position than agentive subjects (e.g. Spec-AppIP instead of Spec-*v*P) or as a different category than agentive subjects (e.g. PP instead of KP) (e.g. Belletti & Rizzi 1988, Landau 2010).

Instrumental PNI occurs when an instrument is incorporated into the verb, as in (59). Here, too, the incorporated argument cannot bear DP-level material. Note though that the subject continues to surface with ergative case when the PNI verb is underlyingly transitive.

(59) *Instrument PNI* (Clemens 2014)

- a. Kua fakahū he ekekafo e tohi he vakalele
 PRF send ERG doctor ABS letter LOC airplane
 ‘The doctor sent the letter on the airplane.’
- b. Kua fakahū vakalele he ekekafo e tohi
 PRF send airplane ERG doctor ABS letter
 ‘The doctor sent the letter on the airplane.’

The same verb can surface in VSO (60a), object PNI (60b), and instrumental PNI (60c) constructions, as in (60).

(60) *PNI possibilities of the verb fakalilifu ‘send’* (Clemens 2014)

- a. Kua fakahū he ekekafo e tohi he vakalele
 PRF send ERG doctor ABS letter LOC airplane
 ‘The doctor sent the letter on the airplane.’
- b. Kua fakahū vakalele he ekekafo e tohi
 PRF send airplane ERG doctor ABS letter
 ‘The doctor sent the letter on the airplane.’
- c. Kua fakahū tohi e ekekafo he vakalele
 PRF send letter ABS doctor LOC airplane
 ‘The doctor sent the letter on the airplane.’

Simultaneous incorporation of an object and instrument argument is unattested (Lauren Clemens p.c.).

Massam (2001) argues that in each case of PNI the incorporated element is generated as complement to the verb. If this is correct, it would mean that full KP objects are generated in a different position

than reduced PNI objects, which are generated in the same position as instrumental NPs. As Clemens observes, this analysis of PNI is incompatible with the commonly adopted view that thematic relationships between predicates and their arguments are determined by syntactic structure (e.g. Perlmutter & Postal 1984; Baker 1985, 1988; Hale & Keyser 1993, 2002). On such views all that is necessary to determine an arguments thematic role is to determine its position. Positing variable base-positions for thematically identical arguments weakens this generalization. I return to the appropriate means of capturing the well-formedness of these types of PNI below. First, however, we must observe where PNI is not attested.

It is not the case that languages which allow the merger of structurally reduced nominals permit it freely. Goal arguments cannot undergo PNI in Sakha or Tamil (61). In other words, they cannot have their case marker omitted when they are adjacent to the verb, thereby achieving a number-neutral, narrowest scope existential reading (Baker 2014). The same effect is attested in Niuean (62) (Massam 2001).¹⁵

(61) *Goals do not incorporate* (Baker 2014)

a. *Sakha*

Misha at-y oqo-*(**lor-go**) bier-de
 M.NOM horse-ACC child-*(**PL-DAT**) give-PST.3SS
 ‘Misha gave (the) children the horse.’

b. *Tamil*

Bala anda pustagatt-e kolande-nga]-*(**ukku**) paḍi-kka virumb-an-aan
 B.NOM that book-ACC child-PL-*(**DAT**) read-NF like-PST-3MS
 ‘Bala likes to read that book to children/a child.’

(62) *Goals do not incorporate* (Clemens 2014)

a. *Ne tuala tagata a au

PST talk people ABS 1.SG
 ‘I was talking to people.’

b. *Fano tapu a ia he aho tapu

go church ABS 3.SG on day Sunday
 ‘He goes to church on Sundays.’

Nor can agentive subjects undergo PNI in these languages. The data is easiest to see in Niuean, as in (63a), where subjects receive overt case marking. Caseless agentive subjects are ungrammatical. Since subjects do not display overt case morphology in Sakha or Tamil, we cannot identify Caseless subjects by the absence of a expected case marker. Nevertheless, Baker (2014) shows that a bare singular subject cannot have a narrowest scope, number-neutral interpretation in Tamil, even if it is adjacent to the verb (62b).

¹⁵ See Kornfilt (1997) for similar observations in Turkish.

(63) *Agentive subjects do not incorporate*

- a. *Niuean* (Massam 2001)
*Koli tagata he pō Falaile
dance person on night Friday
'People dance on Friday night.'
- b. *Tamil* (Baker 2014)
#Bala-ve tirumba tirumba naaji kedj-cc-icci
Bala-ACC again again dog bite-PST-3NS
'A dog bit Bala again and again.'

Example (63b) is only grammatical on the reading where it was the same dog that bit Bala multiple times (Baker 2014).

A descriptive generalization about the placement of objects that can undergo PNI and those that cannot emerges from the data above. Direct, middle, and instrumental objects, generated VP-internally, can be incorporated. Elements generated outside the VP, including agentive subjects and other prepositional arguments that are not selected by the verb, e.g., benefactives, goals, etc., cannot be incorporated. Nevertheless, in the ungrammatical examples, the Caseless argument is in a head-head adjacency configuration with the verb. This position should feed licensing by means of Local Dislocation. We must constrain the application of Local Dislocation in some way to rule out the unattested instances of PNI.

I following Clemens (2014) in capturing the distribution of well-formed PNI arguments by restricting the positions where structurally reduced nominals can be merged. This can be achieved by placing constraints on the variability of categorial selection, or *c-selection*. C-selection refers the lexical category (or categories) that a lexical head is able to licitly take as complement. In this regard, lexical categories – noun, verb, and adjective – display considerable, idiosyncratic variability. For example, different verbs may take finite or non-finite complements, KP or PP complements, or no complement at all. The verb *confide* can take a PP or a PP and a KP, but not just a KP (64).

(64) *C-selection and 'confide'* (Clemens 2014)

- a. You should confide in a friend.
- b. You should confide your secret in a friend.
- c. *You should confide your secret.

There are (at least) two ways to think about how c-selectional requirements can be encoded (Adger & Svenonius 2011). (i) There is little or no independently specified c-selectional requirements; well-formed complementation is determined by non-syntactic factors (see Borer 2005 for such a view). What a verb like *confide* means determines (in part) the lexical categories it can take as complements. (ii) C-selection can be subsumed under feature-valuation (e.g. Chomsky 1965, Svenonius 1994, Emonds 2000, Holmberg 2000,

Julien 2000, Matushansky 2006, Adger & Svenonius 2011). Under this sort of analysis, the English verb *confide* enters the derivation with either a [*uP*] feature or a [*uP*] and a [*uK*] feature.¹⁶

Regardless of exact implementation, we can seize upon the observation that c-selectional variability is limited to lexical heads in order to limit the merger of reduced nominals. Specifically, Clemens (2014) holds that only lexical heads, in fact only the verb (at least in Niuean), can c-select for structurally reduced nominals. Functional heads lack this capability. Arguments introduced by functional heads can never be structurally reduced. They must always be full KPs. Restricting instances of reduced complementation to lexical heads is also attested in the clausal/verbal domain. In English, raising verbs can take both CP and TP complements. Similarly, in restructuring environments in many languages, a subordinating V^0 can take CP, TP *vP*, and/or VP complements depending on the identity of the specific verb (e.g. Wurmbrand 2001 *et seq.*).

We are now in a position to understand why only those arguments introduced by the verb can be structurally reduced. If, only the verb and not higher functional heads in the clause can introduce structurally reduced elements, we immediately capture the availability of PNI for direct objects and middle objects. These arguments are uncontroversially selected by the verb, and can be structurally reduced. Conversely, arguments introduced by higher functional heads such as agentive subjects introduced by Spec-*vP* (Kratzer 1996) and goals introduced by ApplP (e.g. Marantz 1993, Pyllkkänen 2008) or PPs outside of the VP (e.g. Massam 2001) will never show structural variability. The application of Local Dislocation is successfully constrained to rule out unattested instances of PNI as arising to failure to merge a nominal of sufficient size as dictated by the c-selectional requirements of the argument-introducing head. Furthermore, as the small-than-KP argument is base-generated without [*uCase*], it is expect to not participate in canonical case assignment operations.

On this view, instrument arguments must be understood as distinct from other PPs. They, along with direct objects, must be selected by the verb. If this is the case, the verb can display c-selectional variability for the form of the instrument just like it does for objects. The instrument can be either a PP or an NP. This is exactly what Clemens (2014) suggests, and what I adopt here. As she notes instrumentals are among the PPs adjoined in the lowest positions cross-linguistically (see also Schweikert 2005). That position may be so low as to be within the VP. Furthermore, as Clemens (2014) rightly observes, independent empirical observations in Niuean dictate an analysis that distinguishes instrumentals from other PPs. Instrumental arguments pattern with subjects and direct objects with respect to relative clause formation and their ability to take narrow scope under the postverbal particle *oti* ‘all’ (Seiter 1979, 1980; Massam 2002, 2013; Clemens 2014). As Clemens notes, her view does not require variable positioning of arguments, as suggested by Massam (2000). Verbs that select for a single object argument will take that argument, forming a VP. Verbs

¹⁶ On a view whereby [*uF*] need not be valued during the course of the derivation (e.g. Preminger 2011, 2014), it is not immediately clear how a feature-valuation approach to c-selection would rule out an example like (63c). One possibility is that c-selectional features must be valued. Preminger’s conclusion is that some features can survive the derivation unvalued, but even he must accept that some features, crucially person-features, must be valued.

that select for both an object and an instrumental argument will uniformly take the instrumental argument first forming a V' followed by the object forming a VP. On this view, a direct mapping from structure to thematic role is retained. Arguments that are daughter to VP are uniformly Themes. Arguments that are daughters to V' are uniformly instruments. The problem thematic role-syntactic structure mismatch faced by Massam's proposal is avoided. PNI of either the instrument or the direct object can be captured if the other VP-internal argument is a KP and undergoes obligatory movement out of the VP.

A hurdle this proposal must overcome is the ungrammaticality of unaccusative subject PNI, (65).

(65) *Ungrammatical unaccusative subject PNI* (Seiter 1980)

Matakutaku *(e tau) mukemuke he pouli
 frightened ABS PL baby CAUS dark
 'Babies are afraid of the dark.'

Agentive NP subjects are ruled out because the head that introduces them uniformly c-selects a KP. However, unaccusative subjects should not face such problems. As it is introduced by the verb, the unaccusative subject should be well-formed as either a full KP or structurally reduced NP. Something else must rule them out. We might imagine a limitation of c-selectional variability such that unaccusative V⁰ cannot introduce NP arguments. This proposal is quite *ad hoc*. Instead, I posit that such constructions are ruled out, because they do not satisfy other needs of the clause. Specifically, when the unaccusative argument is the only argument in the clause, it may be needed to satisfy the EPP-requirement of some functional head. This view finds strong support in the fact that unaccusative arguments can undergo PNI if another element is present in the clause.

(66) *Grammatical unaccusative subject PNI* (Massam 2001)

Ko e liga ne kamata nonofo tagata a Niue
 PRED ABS likely N.FUT begin settle people ABS Niue
 '... the likelihood that people began to settle in Niue ...'

The well-formedness of these unaccusatives is captured, because the locative argument can satisfy EPP-requirements, when the unaccusative subject is unavailable to do so.¹⁷ A prediction of this view is that the ability for an unaccusative argument to undergo PNI, as the sole argument in a clause, should correlate with the lack of other EPP diagnostics. Furthermore, we would expect other instances of nominal adjunction to be constrained in the same way. Mithun (1984) observes that across languages displaying NI some permit NI with unaccusatives and others do not. The suggestion proposed here could be extended to capture that cross-linguistic difference as well if the languages that lack unaccusative NI display other EPP effects, while

¹⁷ Massam (2000) argues that Niuean subjects are not subject to EPP on T⁰. However, we might imagine that it is an EPP-requirement of v⁰ that must be satisfied. This requirement is immediately satisfied by transitive and unergative subjects, but unaccusatives must move to Spec-vP to satisfy the EPP. The NP-status of the internal argument in PNI constructions may render it invisible to probing by v⁰, making it impossible for this nominal to move to Spec-vP and satisfy the EPP.

the languages that permit unaccusative NI do not display other EPP effects.

Some languages have been reported to allow PNI of transitive subjects, notably Turkish (Kornfilt 1997; Öztürk 2005, 2009). In Turkish, Agents in both transitive (67a) and unergative (67b) constructions can undergo incorporation on a par with Themes in transitives and unaccusatives (Öztürk 2009).

(67) ***Turkish agentive subject incorporation*** (Öztürk 2009)

- a. Ali-yi *arı soktu*
Ali-ACC bee stung
'Ali got bee stung.'
- b. Ağaç-ta *kuş ötüyor*
tree-LOC bird singing
'There is bird singing in the tree.'

Note that since Turkish displays scrambling, it is possible to interpret the examples in (67) as scrambled versions of canonical SOV clauses. However, this reading requires a phonological pause between the noun and the verb. Such a pause does not exist under the PNI reading; the incorporated noun and verb act as a single prosodic unit (Öztürk 2009). At first blush, these data are at odds with the proposal for constraining reduced nominals above. If agentive subjects are introduced in Spec-vP, they should necessarily be full KPs. We might imagine relaxing this restriction such that in some languages reduced nominals could be introduced by functional heads. The rarity of such cases may be independently explained on this view by a language-specific restriction that subjects be specific/definite (e.g. Diesing 1992, Chung & Ladusaw 2004). This would rule out NP subjects in many cases, but it is not clear why DPs would also be ruled out. Alternatively, we might imagine that data like that presented in (67) should not be modeled as merger of an NP in Spec-vP.

The latter position is taken by Öztürk (2009). She provides a number of arguments that the PNI subject in constructions like those in (67) are generated in complement position. She observes that PNI subjects cannot be passivized, bind variables, or control PRO. Öztürk claims that this is because they are not arguments. However, we might also imagine that these effects arise from the structural reduction itself. If movement, binding, and control phenomena are all mediated by ϕ -agreement, and such agreement is case-sensitive (e.g. Preminger 2011, 2014), we could explain the facts as a consequence of structural reduction alone, not position.¹⁸ Other data does however support the view that the PNI subject is not merged in Spec-vP. First, observe that accusative case is retained on the object in (67a). If accusative case like ergative case requires the presence of another nominal in the clause that will receive structural case (e.g. Marantz 1991, McFadden 2004, Bobaljik 2008), accusative should only appear in the presence of another element bearing [*uCase*]. I provide further arguments for this view in Chapter 6. As discussed in Chapter 3, structurally reduced nominals do not bear [*uCase*] which is hosted at K⁰. In Niuean PNI, ergative case disappears when

¹⁸ See e.g. Reuland (2010) and Landau (2004) respectively for proposals of binding and control which is mediated through agreement with T⁰. Preminger (2011, 2014) argues that movement (in some languages) is sensitive to the value of [*uCase*] borne by a nominal.

the object is structurally reduced. The retention of accusative case indicates the presence of another (null) KP in the clause. Öztürk (2009) suggests it is this element that occupies Spec- ν P.

Further support comes from the behavior of non-derived modifiers. These modifiers are ambiguous between adjectives and adverbs. In order to be interpreted VP adverbs, they must occur immediately before the verb, following objects (68a). If they occur preceding the object, as in (68b), they are interpreted as adjectives that modify the object:

(68) *Turkish modifier ambiguity* (Öztürk 2009)

- a. Ali kitab-ı hızlı okudu
Ali book-ACC quickly read
'Ali read a book quickly.'
- b. #Ali hızlı kitab-ı okudu
Ali quickly book-ACC read
'Ali read the quick book.'

Unlike the case in (68b) non-derived modifiers are well-formed preceding pseudo-incorporated nouns as seen in (69) and can allow for both adjectival and adverbial readings. The facts are the same for both object and subject PNI. I only provide data for subject PNI below.

(69) *Turkish subject PNI permits modifier ambiguity* (Öztürk 2009)

- Biz-i bu akşam iyi sivrisinek soktu
we-ACC this evening good mosquito stung
(i) 'We got mosquito bites well.'
- (ii) 'We got bitten by good mosquitos.'

The data above provides further evidence that PNI subjects are not generated in Spec- ν P. That non-derived modifiers can precede PNI subjects retaining their adverbial interpretation suggests that PNI subjects should be analyzed as part of the verbal complex. The NP and V^0 , acting as a single constituent, form a complex predicate. Semantically, a complex predicate formation follows from the predicative nature of the complement NP (Van Geenhoven 1998, Chung & Ladusaw 2004, Farkas & de Swart 2003, Dayal 2011). If the PNI subject is not generated in Spec- ν P, these constructions do not contradict the proposal that structurally reduced nominals can only be introduced by functional heads. A few other languages including Hungarian (e.g. Farkas & de Swart 2004), Hindi (Dayal 2003), and some Athabaskan languages (Baker 2014) have also been said to display PNI subjects. It is my hope that an analysis similar to that provided by Öztürk (2009) for Turkish might be applied to those cases as well. I do not address those issues here.

Under the proposed analysis, Local Dislocation can generally apply to Caseless arguments so long as an appropriate head-head adjacency configuration is achieved. The possible arguments that can undergo PNI are constrained by the independent mechanism of c-selectional variability. Only those arguments introduced by the verb are arguments which can be structurally reduced. Arguments introduced outside of the VP can

never be structurally reduced, and never undergo PNI. This restriction allows us to ensure that arguments that are not direct objects, but nevertheless introduced by the verb, like instrumental arguments, can also undergo PNI.¹⁹

4.4.2 Constraining *in situ* subjects

Constraining external merge of structurally reduced nominals to argument positions of lexical heads immediately rules out merging structurally reduced nominals in Spec-*vP*. This result is welcome with respect to PNI. Agentive subjects cannot undergo PNI. However, this position appears to rule out the attested instances of Caseless *in situ* subjects in Austronesian and Malagasy. Because *in situ* subjects are uniformly DPs, they are insensitive to lexical idiosyncrasies, and they participate in case assignment, I argue that a different mechanism is responsible for the formation of KP-less subjects. Unlike PNI objects, I do not assume that Balinese and Malagasy freely permit the base-generation of KPs and DPs in Spec-*vP*. Rather, I suggest that *in situ* subjects in Balinese and Malagasy enter the derivation as KPs. The reduced (DP) structure of *in situ* subjects is derived as a response to the Subject *in situ* Generalization (Alexiadou & Anagnostopoulou 2001, 2006). This account ensures that only *in situ* subjects display head-head adjacency effects.

The Subject *in situ* Generalization (SSG), originally proposed by Alexiadou & Anagnostopoulou (A&A; 2001) and further updated and defended in subsequent work (A & A 2006), is a condition on the hierarchical position of nominals in the derivation, ruling out certain combinations of arguments within the *vP*.

(70) ***The Subject in situ Generalization*** (A & A 2006).

By Spell-Out, *vP* can contain only one argument with a structural Case feature.

Subjects and objects with structural Case are not allowed to both remain in their base-position: one of them must vacate *vP*. A & A provide evidence from a number of constructions to illustrate the effects of the SSG. For instance, (70) can constrain the distribution of nominals, capturing the transitivity restriction of French and English *there*-existentials (e.g. Bobaljik & Jonas 1996; Déprez 1990), English Quotative Inversion (Collins 1997, Collins & Branigan 1997), French Stylistic Inversion (e.g. Kayne & Pollock 1978; Déprez 1990; Collins & Branigan 1997; Watanabe 1996), and many other constructions.

I follow Richards (2004, 2010) in maintaining that the effects of the SSG are best explained as lineariza-

¹⁹ Local Dislocation itself could be restricted if it is sensitive to prosodic domains. Clemens (2014) shows that Niuean PNI objects are realized within the same prosodic domain as the verb while external arguments are not. If PF has access to prosodic information, we could imagine that being within the same prosodic environment is a requirement for the application of Local Dislocation. The chief problem faced by this analysis is that it does not seem to generalize to the Balinese and Malagasy cases. Data on the prosody of these languages is, unfortunately, not very rich. Nevertheless, it is reported that in Balinese (e.g. Arka 2004) there is no prosodic difference between SV and OV clauses. The verb and post-verbal argument, regardless of thematic role, occupy the same prosodic domain. As such, prosody alone cannot restrict the application of Local Dislocation. If Balinese permitted the free merger of either KP or DP arguments, prosodic domains would group the verb and post-verbal internal argument together. It would then be expected to find evidence of head-head adjacency relationships, which are not attested.

tion failures inside the vP -phase.²⁰ Upon spell out of a phase (CP, vP , KP and PP), which occurs as soon as the next head enters the derivation (Grimshaw 2005; see also Bobaljik & Wurmbrand 2005, Den Dikken 2007, Bošković 2014, Wurmbrand 2014), material from the phase is sent to PF. I take the position that the entire phase spells out when the trigger is merged, as opposed to just the complement of the phase head. Svenonius (2004) demonstrates that edge effects can still be captured even if the whole phase is spelled out and linearized.^{21,22} Given the set A of pairs of asymmetrically c -commanding XPs and X^0 s, a set linearization statements is formed. If $\langle \alpha, \beta \rangle$ is in A , then the *image* of α – the terminals dominated by α – is ordered with respect to the image of β (Kayne 1994).

Richards proposes that PF spell out has impoverished information regarding the content of syntactic structure, making reference only to their label (and possibly some additional information). On such a view, it follows that syntactic nodes with the same label must not be located too close together in the tree – they need to be separated by a spell out domain. Otherwise, they cannot be ordered with respect to each other. Linearization fails whenever the objects in a phase are insufficiently *distinct* (71).

(71) ***Distinctness*** (Richards 2010)

If a linearization statement $\langle \alpha, \alpha \rangle$ is generated, the derivation crashes.

Linearization statements of the form $\langle \alpha, \alpha \rangle$ are uninterpretable, because they are unclear. They may require the element to be ordered with respect to itself or may provide conflicting linearization instructions with respect to the two elements of the same label.²³

²⁰ A & A (2001, 2006) provide Case-theoretic accounts of the SSG. Failure to satisfy the SSG leaves two arguments within the vP with [$uCase$]. Given independent properties of languages like English and French regarding the behavior of the Case-assigning heads T^0 and v^0 , only one of the two will have [$uCase$] valued. The other retains [$uCase$], yielding a common Case Filter violation. Such a proposal is untenable within the model of Case theory adopted in this dissertation. On the current view, the presence of [$uCase$] does not trigger ungrammaticality, if [$uCase$]-valuation is not possible. If the SSG is to provide us with a means of understanding the behavior of those *in situ* subjects that obey head-head adjacency, the effects of the SSG must arise from a non-Case-theoretic mechanism.

²¹ An alternative means of capturing the timing of the derivation I envision here would be to adopt Fox & Pesetsky's (2005) Cyclic Linearization approach. On this view, phases fix linear order, but do not render elements inaccessible to subsequent operations provided those operations do not alter the established linear order. Edge effects are enforced because an element must get to the edge of the phase to be able to maintain its linear precedence with respect to the material inside of the phase upon subsequent movement. However, this view also permits multiple elements to be extracted from a phase (not necessarily the edge) so long as linear order of those elements is maintained.

²² In his original proposal, Richards (2010) assumes a more common view of phases. Only their complement is Spelled Out immediately upon Merger of the phase head (e.g. Chomsky 2000). To ensure that the subject and object are ever generated in the same Spell Out domain, Richards must assume that subjects are not generated in the phase edge Spec- vP , as is commonly posited. Rather, vP is selected by a phase head vcP . It remains to be seen if the effects of these treatments can be disambiguated.

²³ While Richards adopts a specific view of the linearization algorithm, it is not clear to me that how much of Kayne's LCA must be adopted. It may be possible to formulate a rule like *Distinctness* within other linearization algorithms. In the discussion of Local Dislocation above, I tried to remain agnostic about how linearization occurs. I believe I can remain agnostic here, though I will continue to employ notation of the form $\langle \alpha, \alpha \rangle$ for convenience.

On this view, the SSG is a subcase of a more general ban on multiple adjacent objects similar to the Obligatory Contour Principle in phonology. Richards' account captures the data discussed in A & A (2001) as well as phenomena such as the Double *-ing* Constraint (Ross 1972), and the unavailability of certain combinations of ellipsis remnants (see Richards 2010 for discussion).

Crucially, syntactic structures that violate Distinctness are rescuable. Richards (2010) suggests that languages can ameliorate Distinctness violations by adding structure, removing structure, blocking movement that would feed Distinctness violations or additional movement to disrupt Distinctness violations. I preview these mechanisms before extending them to the case of Balinese and Malagasy *in situ* subjects.

The form of nominal complements in English can be understood as a repair strategy for a Distinctness violation. Unlike verbal complements, nominal complements must be introduced by *of*.

(72) **English nominal complements are introduced by *of*.**

- a. They destroyed *the city*
- b. *the destruction *the city*
- c. the destruction **of** *the city*

These facts have commonly received a Case-theoretic explanation. Nominals do not assign Case. As such a nominal complement will not be able to receive Case from the head noun, and, unless otherwise licensed, will trigger a Case Filter violation. The P^0 *of* may be inserted in such environments to provide a source of Case-licensing for the complement (e.g. Chomsky 1980, Stowell 1981). However, if the view of Case provided in Chapter 2 is correct, this account is untenable. [μ Case] on the complement should not trigger ungrammaticality if it cannot be valued. The need for inserting *of* on nominal complements can be understood as a Distinctness repair. (See Chapter 7 for another alternative.) In the ungrammatical string (72b), two D^0 elements are realized within the same phase in violation of Distinctness.²⁴ Inserting a PP creates a phase boundary, sufficiently separating the nominal elements from one another, forming a linearizable string.

Richards (2010) claims that just as additional structure can ameliorate Distinctness violations, so too can deletion of structure. Removing one of the two D^0 elements is another possible repair strategy within complex nominals. For instance, in Hebrew, a complex nominal expressing possession can either utilize a preposition (73a) to an effect similar to *of* in English or it can remove the determiner from the possessed noun, yielding the 'construct state' (73b). The phrases are synonymous (Ritter 1991).

(73) **Hebrew possessed nominals** (Richards 2010)

- a. ha-bayit šel ha-mora
 DET-house of DET-teacher
 'the house of the teacher.'

²⁴ The Distinctness violating string also contains two N^0 elements in the same phase. However, Richards (2010) shows that Distinctness is only sensitive to functional heads. It is only the presence of two D^0 elements in close proximity which is unlinearizable. Presumably the two K^0 elements also trigger Distinctness violations.

- b. (*ha-)bayit ha-mora
 (*DET-)house DET-teacher
 ‘the house of the teacher.’

Both forms satisfy Distinctness. Just like English nominal complements, complex nominals expressing possession in Hebrew can add structure (73a) to avoid having two D^0 's too close together. Otherwise, one D^0 can be deleted (73b), similarly satisfying Distinctness.

Using terms like *adding* and *removing* structure implicates a derivational approach to Distinctness violation repairs. The syntactic derivation is initiated with a certain structure, and, during the course of the derivation, that initial structure subsequently altered. In the case of nominal complements, as in (72), a KP is always merged in complement position. The structure is subsequently amended when the Distinctness violation arises, forming a PP-complement. It is not, however, clear that this view is correct. A representational view of these Distinctness repairs would hold that exceptionally larger or smaller structures can be merged to overcome an otherwise unavoidable Distinctness violation. In the case of nominal complements, as in (72), either KP or PP can be freely merged in complement position. The structure with a KP-complement is then ruled out due to a Distinctness violation. Here, I will maintain a derivational approach. A problem faced by the representational approach, as sketched here, arises in environments that do not violate Distinctness. If both KP and PP can be merged as complements to nouns like *destruction*, we would expect, all things being equal, that both KP and PP can be merged as complements to verbs like *destroy*. An additional mechanism would be needed to rule out PP complements in such instances. A derivational approach does not require this mechanism. A KP is merged as complement to both *destroy* and *destruction*. Only as complement to the noun will Distinctness be violated, requiring the addition of structure. A drawback to this approach is its anti-cyclic nature, but see e.g. Rezac (2011) for a cyclicity-compliant approach to adding structure within an already formed derivation.

I argue that the KP-lessness of Balinese and Malagasy *in situ* subjects is achieved as a means of ameliorating a Distinctness violation. It does not arise, as was posited for PNI constructions, from the free base-generation of structurally reduced nominals. Specifically, when the subject remains *in situ* Distinctness is overcome by removing the nominal's KP-layer. In the absence of KP, *in situ* subjects must obviate the proposed Case Filter and can do so by means of Local Dislocation. Whenever a ν P phase is formed that contains two KP arguments a Distinctness violation, of the form $\langle \text{KP}, \text{KP} \rangle$, will be created. I suggest that in Balinese and Malagasy this violation is remedied by structural reduction of the subject KP, yielding the linearizable ordering of $\langle \text{DP}, \text{KP} \rangle$, and requiring the now DP subject to undergo licensing via adjunction. Failure to do so yields ungrammaticality due to a Case Filter violation. This requirement is obligatory whenever two KPs are generated within the ν P, explaining the lack of idiosyncrasy in head-head adjacency. Furthermore, if case assignment is achieved prior to the Distinctness repair, we expect the subject to participate in canonical case assignment operations.

First consider the clearest cases, instances of clauses with three arguments where neither the subject nor

object is promoted to Pivot, as in (74).

(74) **Two overt vP-internal KPs**

a. *Balinese* (Arka 2004)

Beli Man mula baang (*ibi) tiang abesik
 brother M. really OV.give (*yesterday) 1SG one
 ‘I really gave you (Brother Man) one.’

b. *Malagasy* (Pearson 2001)

Amonoa’ (*haingana) ny mpamboly ny akoho ny antsy
 OBLV.kill (*quickly) DET farmer DET chicken DET knife
 ‘The knife, the farmer is killing the chickens (with it).’

In the Balinese example (74a), the indirect object of a double object construction is promoted to Pivot. The other two arguments, realized to the left of the verb, remain within the vP. In the Malagasy example (74b), an instrumental argument is promoted to Pivot, triggering Oblique Voice morphology and yielding two vP-internal KPs. In both cases, the unlinearizable string <KP,KP> is formed. As posited above, this distinctness violation can be remedied by stripping the KP subject of its KP-layer. Removal of structure creates the linearizable string <DP, KP>. This DP must be licensed in the absence of [*uCase*]. Adjunction to the verb satisfies this licensing requirement and ensures the *in situ* subject will be adjacent to the verb. As the ungrammaticality of intervening adverbs indicates, this adjacency requirement is enforced.

However, there are many instances in which it is less clear that a Distinctness violation should arise within the vP. The vP would appear to contain only one KP. Nevertheless, *in situ* subjects still display head-head adjacency. As we saw in Chapter 3, head-head adjacency is mandated whenever the subject remains in its base-position. In transitive clauses with two KP arguments, Distinctness violations still appear. For instance, in Balinese (75a), head-head adjacency cannot be licitly disrupted by an adjective even though the object has been promoted to Pivot. Similarly, in Malagasy (75b), promotion to Pivot of the object does not permit the adverb to intervene between the subject and the verb.

(75) **Distinctness in spite of movement?**

a. *Balinese*

*Nyoman gugut liu cicing
 N. OV.bite many dog
 ‘Many dogs bit Nyoman.’

b. *Malagasy* (Pearson 2001)

*Nohanin’(a) haingana ny gidro ny voankazo omaly
 PST.OV.eat quickly DET lemur DET fruit yesterday
 ‘The lemur ate the fruit quickly yesterday.’

In addition to adding or removing structure, Richards (2010) proposes that Distinctness violations can be ameliorated by suppressing or applying syntactic operations to disrupt unlinearizable strings. By suppress-

ing movement, or its effects (i.e. by realizing the lower copy of a movement chain), Distinctness violations can be ameliorated. Similarly, moving an element farther in the derivation, or, at least, pronouncing a higher copy of a movement chain can also satisfy Distinctness. Again, Distinctness violations are repaired by separating the two similar elements by a phase boundary. If movement is a means of repairing Distinctness Violations, because unpronounced copies do not need to be linearized (Nunes 2004), we would not expect any structural reduction in examples like (75). Rather, the *in situ* subject should remain a full KP and need not display head-head adjacency, contrary to fact. If we hope to capture the adjacency behavior of *in situ* subjects as a response to a Distinctness violation, this issue must be addressed.

There are at least two possible approaches to capturing why promotion to Pivot does not remedy a Distinctness violation. One possibility is to adopt a non-movement account of promotion to Pivot. On this view, the Pivot argument is base-generated in an \bar{A} -position, and is coreferent with a null operator in the relevant argument position. Such an account has been suggested for Malagasy (e.g. Pearson 2001, 2005). Alternatively, we might imagine that movement *never* remedies Distinctness violations, such that the lower copy of the Pivot argument still counts for Distinctness. I consider both of these possibilities below.

Pearson (2001, 2005) observes that while promotion to Pivot has some of the properties of \bar{A} -movement, it does not have all of them. Specifically, he observes that Pivot arguments can reconstruct, but they do not trigger weak crossover effects. Constituents which undergo \bar{A} -movement are generally interpreted in their trace positions for purposes of binding (reconstruction). The sentence in (76a), for example, shows that *wh*-movement of a constituent containing an anaphor over its antecedent does not yield a Condition A violation. By contrast, constituents which undergo A-movement fail to reconstruct, and are interpreted in their landing sites for binding purposes. This is illustrated in (76b), where A-movement of a pronoun over an R-expression with which it is coindexed results in a Condition C violation.²⁵

(76) ***A-movement feeds binding violations, \bar{A} -movement does not***

- a. [Which picture of herself]_i]_k does Jessica_i like *t*_k best?
- b. *He_i is likely [*t*_i to have appeared to James_i [*t*_i to have won the race]].

Turning to Malagasy and Balinese, elements in Pivot position can reconstruct. A reflexive anaphor may be promoted to Pivot over its antecedent without violating Condition A (or Condition C) (Arka 2004, Rackowski & Travis 2000, Wechsler & Arka 1998).

²⁵ The generalization that \bar{A} -movement reconstructs and A-movement does not has been questioned (e.g. Corver & van Riemsdijk 1994, Pearson 2001). For example, A-moved pronouns do not reconstruct, but a pronoun inside the complement in an A-moved constituent appears able to be interpreted in the base-position of that constituent – e.g. in *The pictures of his father seemed to each boy to be less beautiful than the pictures of his mother, his father* may be bound by *each boy* (see e.g. Chomsky 1995, Sportiche 1999 for discussion). Despite such confounds, reconstruction effects do appear to be a good diagnostic for distinguishing (canonical) A-movement, like raising, from (canonical) \bar{A} -movement, like *wh*-movement.

(77) **Reflexives in Pivot position reconstruct**

- a. *Malagasy* (Pearson 2005)
Novonoin' ny lehilahy_i ny tenany_i
PST.OV.kill DET man DET self-3
'The man killed himself.'
- b. *Balinese*
Awakne tingalin=a
self OV.see=3
'(S)he saw himself/herself.'

The facts for variable binding in Malagasy are the same. In SV clauses, a quantified external argument Pivot may bind into a predicate-internal object (78a). Binding is also possible if the external argument is *in situ* and the internal argument is promoted over it in a OV clause (78b).

(78) **Pivot elements reconstruct** (Travis 1997)

- a. Nanoroka ny vadiny_i ny vehivavy rehetra_i
PST.SV.kiss DET spouse-3 DET woman all
'All the women_i kissed their_i spouse(s).'
- b. Norohan' ny vehivavy rehetra_i ny vadiny_i
PST.OV.kiss DET woman all DET spouse-3
'Their_i spouse(s), all the women_i kissed.'

Balinese displays an interesting restriction in variable binding such that corresponding examples are ungrammatical. Arka (2004) notes that, in variable binding configurations, the quantified element must linearly precede the variable.²⁶

Although promotion to Pivot in Malagasy (and Balinese) exhibits reconstruction effects, it fails to show another binding-related property characteristic of \bar{A} -movement – weak crossover effects. In (79a), *which boy* cannot bind the pronoun *his*, despite the establishment of the requisite c-command relationship, because *his* is contained within an argument which c-commands the *wh*-trace. For the pronoun to be interpreted as bound by the *wh*-phrase, it must be c-commanded by the *wh*-trace, as in (79b).

(79) **Weak crossover**

- a. ?*Which boy_i did you say [his_i mother loves t_i]?
b. Which boy_i did you say [t_i loves his_i mother]?

Malagasy displays anti-weak crossover effects (Pearson 2001, 2005). Consider (80), involving a quantified object and an subject containing a pronoun. In (80a), where the subject is the Pivot, a bound variable reading of the pronoun is disallowed. However, when the object is the Pivot, (80b), a bound variable reading

²⁶ Paul (2002) offers some objections to the Malagasy data, claiming that it does not provide support for obligatory reconstruction from Pivot position. See Pearson (2005) for a discussion of these points and arguments against Paul (2002).

becomes visible.

(80) **Promotion to Pivot does not ameliorate weak crossover** (Travis 1997).

- a. *Nanoroka ny vehivavy rehetra_i ny vadiny_i
PST.SV.kiss DET woman all DET spouse-3
'Their_i spouse(s) kissed all the women_i.'
- b. Norohan' ny vadiny_i ny vehivavy rehetra_i
PST.OV.kiss DET spouse-3 DET woman all
'All the women_i, their_i spouse(s) kissed.'

The creation of new binding configurations is commonly taken as a telltale sign of A-movement. The absence of weak crossover in (80b) would thus seem to contradict our conclusion based on the reconstruction data. However, while the presence of weak crossover is a reliable diagnostic for \bar{A} -movement, the absence of weak crossover alone cannot be evidence for A-movement. While *wh*-movement triggers clear weak crossover effects (79), other \bar{A} -movement constructions in English do not trigger such effects (Lasnik & Stowell 1983). Such effects are termed *weakest crossover*. For instance, weak crossover effects are absent for many speakers in *tough*-movement and parasitic gap constructions.

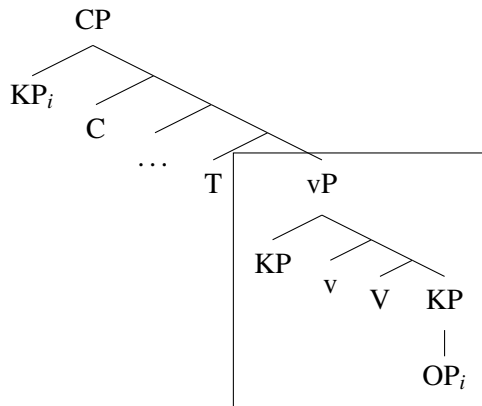
(81) **Weakest crossover**

- a. ?Every boy_i is easy for his_i mother to talk to *t_i*.
- b. ?Which boy_i did you see *t_i* before his_i mother had talked to *t_i*?

Pearson (2001, 2005) sees the behavior of Malagasy Pivots with respect to reconstruction and weakest crossover as characteristic of constructions in which a null operator-variable chain is coindexed with an antecedent in a non-argument position. The types of \bar{A} -constructions which display weakest crossover have been analyzed as involving null operators (e.g. Chomsky 1977, 1981). As such, he claims that the data presented above support a treatment of the Malagasy Pivot as base-generated in an \bar{A} -position, and in a dependency relationship with a null operator in argument position.

The null operator account of Malagasy clause structure can be schematized, as in (82), for an OV clause.

(82) *Null operator account of OV.*



The Pivot is base-generated in a non-argument \bar{A} -position. No movement takes place and thematic connectivity is achieved via co-reference with a null operator in argument position. Adopting this view, it becomes possible to understand why Distinctness violations might arise even though there is one overt KP within the vP. There is, in fact, another (null) KP within the vP. If null operators, unlike traces, must be linearized, the presence of the null operator yields the unlinearizable string <KP,KP>, which is ameliorated by converting the subject KP to a DP. Subsequent head-head adjacency is a means of vacuously satisfying the Case Filter.

However, other data suggest that, at least in some languages, there is movement to Pivot position. For instance, in Dinka a Nilotic language displaying all relevant properties of an Austronesian Voice system (Erlewine, Levin, & Van Urk 2015), movement of plural arguments through phase edges is tracked by a phenomena called *ke*-stranding (e.g. Van Urk & Richards 2015, Van Urk 2015).

(83) *Dinka ke-stranding* (Coppe van Urk p.c.)

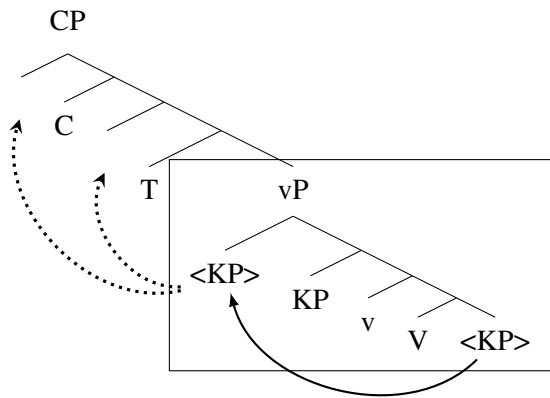
- a. Ròḡor áa-cíí Áyèn [_{vP} **kê** t̥iŋ].
 men 3P-PRF.OV Ayen.GEN **3PL** see.NF
 ‘The men, Ayen has seen.’
- b. Kêek áa-cíí Áyèn [_{vP} **kê** t̥iŋ].
 they 3P-PRF.OV Ayen.GEN **3PL** see.NF
 ‘Them, Ayen has seen.’

Whenever a plural argument moves through Spec-vP, the marker *ke* is stranded at the phase edge. Such a phenomenon appears incompatible with a null operator account, why a null operator dependency should mark the phases it spans and signal plurality is unclear. At the very least, this data suggests that some languages achieve promotion to Pivot by means of movement; and many analyses of Austronesian clause structure do invoke a movement analysis of promotion to topic (e.g. Guilfoyle et al. 1992, Rackowski 2002, Aldridge 2004, Legate 2012). Nothing I say provides evidence to force the conclusion that movement or

null operator dependencies are always utilized cross-linguistically.

Under a movement analysis of promotion to Pivot position, an OV derivation is schematized as in (84).

(84) *Movement account of OV.*



On a movement account, the Pivot argument undergoes movement through the vP edge to Pivot position. On some accounts Pivot position is T^0 , in others it is C^0 . I remain agnostic on this point here. In the case of OV, it is the internal argument that undergoes this movement. Additional Voices are formed by vP-internal movement of different arguments to the highest Spec-vP position followed by movement of that argument to Pivot position, except in the case of SV where the external argument generated in Spec-vP undergoes movement to Spec-CP (e.g. Richards 2000, Rackowski 2002, Rackowski & Richards 2005). Again, Voice morphology can be seen as the morphological realization of feature valuation either on C^0 , reflecting which argument was targeted by the head for movement to Spec-CP (e.g. Chung 1994; Van Urk 2015), or on T^0 (e.g. Rackowski 2002; Rackowski & Richards 2005). What is crucial for the current proposal is what takes place within the vP.

If unpronounced copies do not play a role in linearization statements, as Richards contends, no Distinctness violation should be triggered. Only the subject will be pronounced within the vP, so no linearization statement of the form $\langle KP, KP \rangle$ will be generated. The head-head adjacency requirement can then not be seen as a Distinctness repair. However, there is a subtle consideration here as to what happens upon movement or suppression of movement to the Distinctness violating item. For instance, if a Distinctness violation of the form $\langle \alpha, \alpha \rangle$ is formed in a lower phase, does movement itself ameliorate the Distinctness violation or does movement simply obscure the realization of the Distinctness repair? That is to say will the lower copy, or higher copy of a movement chain still require the addition or removal of structure to render it sufficiently distinct, despite ultimately not be pronounced? In these cases, such a repair would subsequently be obscured because another copy of the moved element, which had not be altered to satisfy Distinctness, would be pronounced. For Richards (2010) the answer is no. However, I posit that copies are relevant to Distinctness.

Assuming that these copies are relevant, we then do have a Distinctness violation in the vP phase of

(84) which again can be ameliorated by removing the KP-layer from the subject, forming a DP in need of licensing by adjunction. Similarly, if the subject is promoted to Pivot, it's ν P-internal copy should also be affected. Of course, the result of removing the KP-layer of a copy that will not be pronounced will not be realized overtly. This does not, however, mean it has not taken place.

Adopting a Distinctness-based analysis also captures the generalization observed in Chapter 3 regarding the ordering of movement operations in Balinese. Recall that Balinese, and other Indonesian languages, can be distinguished from other Western Austronesian languages as they permit multiple arguments to be targeted by \bar{A} -operations. This was contrasted with languages like Malagasy which only allow the argument cross-referenced by Voice to undergo subsequent \bar{A} -operations like *wh*-question formation, relativization, topicalization and focus movement. Balinese permits certain combinations of Pivot and other \bar{A} -elements. Objects can be questioned (85a) and topicalized (85b) across a subject in Pivot position.

(85) ***Balinese Non-Pivot objects can move***

- a. *Buku nyen* Nyoman baca?
book which Nyoman OV.read
'Which book did John read?'
- b. *Kopi-ne niki tiang nunas*
coffee-DEF this 1 SV.take
'This coffee, I took it.'

However, subjects cannot be questioned (86a) or topicalized (86b) across objects in Pivot positions.

(86) ***Balinese non-Pivot subject can't move***

- a. **Anak cerik cen* be-e daar?
person small which fish-DEF OV.eat
'Which boy ate the fish?'
- b. **Cicing ia uber*
dog 3 OV.chase
'A dog, it chased him/her.'

The dichotomy in (85) and (86) can be captured by the generalization in (87).

(87) ***Balinese subject movement generalization***

A subject can be extracted from the ν P iff it is the first argument to be extracted.

If the subject is not the first argument to be extracted it will be the target of the Distinctness repair, rendering the subject KP a DP. Once the subject becomes a DP, movement of the subject should be impossible. It may either be ruled out by positing that DPs are not possible targets for movement or that upon movement the DP subject is placed in a position from where licensing via Local Dislocation with the verb is impossible. Only by moving first out of the ν P will there be a copy of the subject that is a full KP which can serve as the

target of movement triggering operations and without need of licensing in the absence of case.²⁷

A question raised by this account is why the subject KP, and not the object KP, should have its KP-layer removed. I suggest that different languages may require different explanations. In the Hebrew construct state, it would appear that it is always the highest nominal that is targeted for structural reduction. However, in Malagasy, it may be due to the fact that the subject's [*u*Case] remains unvalued during the course of the derivation. As argued in Chapter 2, at least some Western Austronesian languages are best modeled as nominative-accusative languages. It was on this view that we could understand why default Voice in restructuring constructions is always syncretic with SV in many Formosan languages, why Voice cross-cuts thematic role and transitivity in the same way that nominative case does in Tagalog, Dinka, and Atayal, and why Malagasy displays nominative-accusative patterns in its pronominal system. There may be some advantage in removing an unvalued Case-feature over a valued one. No information would be lost by completely removing [*u*Case]. Failure to value [*u*Case] or not realizing it at all still indicates that the nominal in question has not been assigned case, because the nominal is not in the requisite environment.

Case, and not other factors such as hierarchical position, appears to be the relevant factor in determining which argument will be targeted for structural reduction in response to the Distinctness violation. In Malagasy, non-arguments can be promoted to Pivot by means of the Oblique Voice (OblV), commonly referred to as the Circumstantial Pivot, as in (88).

(88) *Malagasy Oblique Voice* (Paul 2000)

- a. Nanapahan'i Sahondra ity hazo ity *ny antsy*
PST.CT.cut Sahondra this tree this DET knife
'The knife was used by Sahondra to cut the tree.'
- b. Itoeranay ity trano ity
OBLV.live.1P this house this
'This house is lived in by us.'

A range of elements can be promoted to Pivot via OblV, including place, time, goal, cause, means, manner, instrument, price, benefactive, and locative arguments (Rajemisa-Raolison 1966).

Quite commonly, the element promoted to Pivot in an OblV clause originates as the object of a preposition. Compare the form of a locative argument in SV and OblV below.

²⁷ This view of Distinctness repairs requires that the resulting structure is still visible to syntax. Distinctness repairs can not then be viewed as operating solely on final PF representations. Richards (2010) suggests that a derivational approach to Distinctness repairs is welcome in that it provides an explanation for why certain Distinctness repairs are attested where other repairs that would also resolve the Distinctness violation are not. He implements Distinctness within the derivation as in (i).

(i) *Derivational Distinctness* (Richards 2010)

Given a choice between operations, prefer the operation (if any) that causes a Distinctness violation to appear as briefly as possible in the derivation.

On this view, the Distinctness violation of the unlinearizable string <KP,KP> is remedied *within the syntax*. If the subject is not extracted first from the *v*P, it will be rendered a DP and be incapable of undergoing subsequent syntactic operations.

(89) *OblV Pivots are realized as PPs elsewhere* (Paul 2000)

- a. Mitoetra [amin'ity trano ity] ry Ratsimba
SV.live P.this house this DET R.
'The Ratsimnas live in this house.'
- b. Itoeran-dry Ratsimba ity trano ity
OBLV.live-DET R. this house this
'This house is lived in by the Ratsimbias.'

The common analysis of this behavior, offered first by Guilfoyle et al. (1992) and altered and defended in Paul (2000), is to assume that the P⁰ surfaces in (89a) is incorporated into the verb, along the lines of Baker (1988), in (89b). Subsequently the complement of the preposition is promoted to Pivot. Alternatively, it is conceivable that the non-core argument is introduced by an applicative head in (89b); see Rackowski (2002) for such a proposal for Tagalog. I will not offer arguments in favor of either analysis here.²⁸ Under either analysis, the Pivot of a OblV clause can be case-marked by a specific functional head, receiving lexical/oblique case from P⁰ or Appl⁰.

As an argument of the OblV clause, the lexical/oblique case-marked element should be linearized as a KP, raising the possibility of a Distinctness Violation. Indeed, in OblV clauses that contain the oblique Pivot and a subject, the subject still displays head-head adjacency (90).

(90) *Unergative and unaccusative subjects display head-head adjacency*

- a. Ipetrahan' (*anie) ny vehivavy ny vato
OBLV.sit (*really) DET woman DET rock
'The woman is sitting on the rock.'
- b. Andihyan' (*really) ny vehivavy ny vato
OBLV.dancing (*anie) DET woman DET rock
'The woman is dancing on the rock.'

Crucially, observe that this adjacency is enforced regardless of whether the verb is unaccusative (90a) or unergative (90b). Under common analyses of unergatives and unaccusatives, we expect the unergative subject to be introduced above the oblique argument, whereas the unaccusative subject should be introduced in a structurally lower position. That both types of arguments display head-head adjacency suggests that the structure-reducing Distinctness repair does not target the highest nominal, but targets the nominative nominal regardless of its base-position. On a nominative-accusative treatment of Malagasy, the core-argument of both unergative and unaccusative predicates should receive nominative case, i.e. retain [*u*Case] throughout the derivation. If Distinctness violations are resolved by removing KP from the nominative element, we can capture the uniform behavior of the thematic subjects in (90).

The behavior of Balinese Voice morphology poses problems for a unified approach to determining the

²⁸ For Guilfoyle et al. (1992), promotion to Pivot is for Case-licensing purposes. This detail of the analysis cannot be supported on the view of Case defended in this dissertation. However, Paul (2002) provides arguments against this Case-theoretic account, instead attributing promotion to Pivot to the EPP.

KP targeted for Distinctness repair. In transitive clauses, Voice cross-references the argument in initial position. Subjects require Subject Voice and objects require Object Voice. However, unlike Malagasy (and Tagalog) Voice differences are also attested in intransitive clauses with singular arguments. Balinese exhibits a split-intransitive pattern in its Voice morphology; unergatives bear Subject Voice (91a,b), while unaccusative subjects bear Object Voice (91c,d) (Arka 2004).

(91) ***Balinese split-intransitive Voice***

- a. Nyoman negak
N. SV.sit
'Nyoman sat.'
- b. Made nyongkok
M. SV.squat
'Made squatted.'
- c. Ketut ulung
K. OV.fall
'Ketut fell.'
- d. Wayan teka
W. OV.come
'Wayan came.'

There are (at least) two ways of understanding these facts: (i) Assuming that in Balinese, as in other Western Austronesian languages, Voice reflects the case of the argument it cross-references, we must conclude that Balinese is an ergative-absolutive language with split-intransitivity, alternatively terms an 'active-stative' system. If this is the true, the case-based account of Distinctness repair, formulated for Malagasy above, cannot be maintained in Balinese. Like the Hebrew construct state, it is the highest nominal that is subject to structural removal.²⁹ Alternatively, we might conclude that Balinese is still nominative-accusative, but that Voice *does not* cross-reference case. Instead, Voice might be mapped to thematic role or indicate that a non-local argument, i.e. non-external argument, has been extracted from VP, capturing why direct and indirect object extraction is marked uniformly. More research is needed to determine the proper model of Voice morphology in Balinese.

In sum then, by viewing the Caselessness of *in situ* subjects in Balinese and Malagasy as a Distinctness repair that targets the nominative KP whenever two KP arguments are generated within the *v*P, we are able to constrain head-head adjacency to exactly those nominals that display it. Only *v*P-internal subjects are derived DPs. This account is distinct from that of PNI arguments, which I claimed above were base-generated as structurally reduced arguments. Adopting two analyses for the source of KP-lessness, I argue, is welcome. The analyses accurately capture the attested and unattested patterns of KP-lessness. Furthermore,

²⁹ In fact, we might also apply this analysis to Malagasy if we conclude that adjuncts are always generated lower than both unergative and unaccusative subjects (cf. Pesetsky 1995).

adopting two accounts captures some of the more subtle differences between KP-lessness in the two environments. PNI objects display cross-linguistic variability both in structural size, structural position, and the verbs that permit them. This variability lends itself to restriction by c-selection which, as noted above, is itself an idiosyncratic process.³⁰ Caseless subjects however display no variability. As Balinese and Malagasy illustrated, *in situ* subjects are DPs. Any element that can be hosted in the DP is well-formed within an *in situ* subject so long as the head-head adjacency requirement is maintained. There are also no idiosyncratic restrictions on the verbs whose *in situ* subjects display an adjacency requirement. Furthermore, adopting two approaches to KP-lessness explains why PNI object disrupt canonical case marking, but *in situ* subject do not.

4.5 Conclusion

Chapter 3 identified two environments in which nominals display unique distributional constraints. The internal arguments of PNI constructions and the *in situ* subjects of Balinese and Malagasy both display a strict linear head-head adjacency requirement with the verb. Whenever elements intervene between the nominal and the verb, or the requisite adjacency would be broken up by subsequent movement operations, ungrammaticality arises. In this chapter, I presented an analysis of this behavior as a means of licensing nominals that are not full KPs. Nominals without a K^0 cannot satisfy the proposed Case Filter. In order to realize such arguments, they can be licensed via adjunction to the verb. Such adjunction was argued to be achieved under Local Dislocation, a PF operation which operates on linearly ordered strings. Like the head-head adjacency pattern discussed in this chapter, standard Local Dislocation is sensitive to strict linear order. As such, it is natural to extend the mechanism to capture the behavior of Caseless arguments. While the two environments explored in this chapter appear to be subject to the same linear head-head adjacency requirement, it was suggested that how the nominals in question come to be Caseless is different in the two scenarios. PNI internal arguments are merged without K^0 . They are NPs or DPs, not KPs. Balinese and Malagasy *in situ* subjects are always merged as KPs. Their Caselessness is derived. They become DPs to resolve a Distinctness violation endemic to Voice system languages. However, resolving the Distinctness violation requires them to be licensed alternatively, subjecting them to the same head-head adjacency requirement as those arguments that, in the first place, generated without a K^0 were.

I suggested that adjunction can obviate the proposed Case Filter by rendering the nominal projection part of the verbal projection. If the verbal projection is successfully completed, eventually culminating in a CP, the extended projection will be well-formed and the KP-less nominal will be licensed.

³⁰ A Distinctness analysis does not explain why the PNI object should have the syntax and semantics of an NP. If removing only the KP-layer is sufficient to resolve Distinctness violations, something else would have to be said to ensure that PNI objects always became derived NPs. Relatedly, if one were able to ensure that the KP and DP layers of the object were removed in PNI constructions, it may still not affect the interpretation of these elements. If Distinctness violations are repaired at PF, they should have no ramifications for LF; but a derivational approach to Distinctness may address this.

The need to alternatively license nominals that do not have K^0 suggests that the proposed Case Filter is real. It is not enough to say that the distribution of such elements is simply constrained by their semantics, nominal size, or prosodic requirement. K^0 then must be seen as responsible for determining the distribution of nominals. Specifically, nominals that have Case, i.e. have a K^0 , have a different distribution. The lack of a K^0 affects the distribution of both the nominal in the clause and the distribution of elements within the nominal. Both must be constrained in order to ensure that the nominal head and the verbal head are adjacent to permit licensing via the adjunction operation of Local Dislocation. These data are particularly persuasive in supporting the relevance of Case for the distribution of nominals, because they cross-cut all definitions of case. Under most theories of *C/case* in the literature, we can be sure that PNI objects and, by extension, Balinese and Malagasy subjects do not have it. The behavior of Caseless arguments is different from the behavior of case-marked arguments. As such, *C/case* can be pinpointed as a factor in determining the distribution of nominals.

The notion that adjunction can serve as an alternative to Case licensing is not new. Baker (1988) argues that Noun Incorporation also yields adjunction of a nominal to a verb, creating a head-head adjacency configuration, and simultaneously obviating the Case Filter. However, the arguments which can be licensed by adjunction under Local Dislocation and the intervening elements that the operation is sensitive to are distinct from what one finds in Noun Incorporation constructions. Unlike morphological Noun Incorporation, external arguments can be licensed under Local Dislocation. Furthermore, elements that are not heads still disrupt adjacency. Adjectives which can be stranded by morphological Noun Incorporation cannot be stranded when licensing is achieved via Local Dislocation. Furthermore, elements that are structurally subordinate, but linearly precedent, can also intervene, suggesting that linear order is truly at play. The facts then suggest that multiple adjunction strategies are available in the grammar and that (any of) these strategies may be used for the express purpose of adjoining a nominal element to a verbal element in order to licensing the nominal in the absence of K^0 .

Despite the findings and analyses presented here, it is unlikely that all linear adjacency constraints can be explained in the same manner. For example, the direct object in English must be strictly adjacent to the verb, with no adverb or PP intervening (Stowell 1981). Nonetheless, this is unlikely to have anything to do with licensing Caseless arguments via adjunction. The Case Adjacency requirement holds for all nominals in English – definite DPs, pronouns, proper names, quantified expressions, etc., and applies also to goal arguments, e.g. **I sent quickly Mary a ring*. It seems likely that other adjacency phenomena should still be explained in other ways – e.g. elements X and Y are adjacent because X is the complement or specifier of Y. Johnson (1991) and Koizumi (1995) among others provide such accounts of English Case Adjacency. I return to a fuller examination of the English facts in Chapter 7. If this distinction is on the right track, different kinds of adjacency then may be modeled distinctly.

Before concluding this chapter, it is worth briefly discussing the locus of the proposed Case Filter. As we have seen the proposed Case Filter can be obviated by a PF operation. At first, this might seem to indicate that the proposed Case Filter must be evaluated at PF. On this view, Local Dislocation applies, if it

can, prior to the evaluation of the proposed Case Filter. By the time the proposed Case Filter is evaluated, later in PF than the application of Local Dislocation, those smaller-than-KP nominals that have successfully become part of the verbal extended projection will obviate the proposed Case Filter, yielding a well-formed derivation. However, this is not necessarily the case. It is also conceivable that the proposed Case Filter is evaluated within the narrow syntax, perhaps at spell-out to PF. Here the proposed Case Filter identifies all nominals that are smaller than KP and initiates the post-syntactic operation of Local Dislocation to ameliorate the identified violation if possible. The present analysis is then compatible with placing the proposed Case Filter either in PF or in syntax. We can only be sure that the proposed Case Filter cannot be placed in LF (*contra*. e.g. Chomsky 1981, Lasnik & Friedin 1981, Rizzi 1982, Burzio 1986, Shlonsky 1987, Baker 1991, Phillips 1993). I will present some discussion of the facts that motivated an LF common Case Filter in Chapter 7, demonstrating that the empirical evidence that supported such a view can be reanalyzed in non-Case-theoretic terms.

Appendix: Baker's (2014) analysis of PNI

This chapter began by highlighting a crucial difference between morphological Noun Incorporation and Pseudo Noun Incorporation. The former is sensitive to hierarchical structure and creates discontinuous dependencies, the latter is not. Given this distinction a straightforward implementation of the Head Movement account of Noun Incorporation will not suffice. Baker (2014), well aware of this difference, offers an account of PNI that relies on (a special kind of) Head Movement, which blocks the creation of discontinuous dependencies. He proposes that PNI is achieved when the nominal root, N^0 , undergoes head movement forming a complex verbal root. However, unlike morphological noun incorporation, the lower copy of the nominal root is also retained within the NP. A structure like (92) is achieved within the narrow syntax.

(92) *Pseudo noun incorporation is string vacuous head movement* (Baker 2014).

I [_{VP} [_{NP} yellow *flower*] [_V *flower*-pick]]

Baker proposes that in the syntax, the nominal head undergoes Head Movement to adjoin to the verb, forming a complex verbal head which is then treated for the remainder of the derivation as a verbal element. The advantage of such an approach is that it simultaneously captures the adjacency demands placed on the nominal root both by the verbal root and other elements within the NP – the nominal *must* be adjacent to both. This satisfies strict head-head adjacency, while permitting the object NP to retain its phrasal character. Using Head Movement to capture the facts of PNI requires the noun to be in *two places at the same time*. Only at PF will the two instances of the nominal coalesce to be pronounced once. The crucial prerequisite for coalescence is linear adjacency.

Following Nunes (2004) *inter alia*, Baker holds that moved expressions are (for the most part) pronounced only once. Such a constraint arises due to the need to pronounce words in order at PF, avoiding

clashing linearization statements that would arise if two copies of a moved element maintained distinct precedence relationships with respect to another element. The usual remedy is to pronounce the higher copy (Nunes 2004). In some cases, however, pronouncing the lower copy is also possible (Bobaljik 2002). Nunes (2004) proposes that higher copies are often chosen to be retained for economy purposes – their uninterpretable features have already been deleted through feature-checking. Baker sees head movement as falling outside the purview of such considerations. Baker (2014) maintains that Head Movement is driven *either* by PF- or LF-requirements. Namely, in the case of morphological incorporation, Head Movement is driven by the morphological requirements of the verb to be realized as a suffix (e.g. Johns 2007). In the case of PNI, Head Movement is driven by the semantic requirements of the verb to be realized as a complex predicate (e.g. Dayal 2011). When Head Movement that has PF ramifications, e.g. morphological noun incorporation or V^0 -to- T^0 movement to drive verbal inflection, the higher copy will always be pronounced. PNI is unique from both phrasal movement and morphologically-driven head movement. It is driven neither by syntactic nor PF-requirements, and, therefore, which copy to pronounce is difficult to determine. PF finds itself with no principled way of choosing between the two copies in a string like (92). Such unlinearizable derivations crash. Only when the two copies are string adjacent and can be coalesced, i.e. pronounced at the same time will the derivation converge. This is only possible when movement is string vacuous.

Baker takes as a welcome result the observation that the elements that can undergo PNI, discussed in Section 4.4.1, are identical to those that can undergo morphological noun incorporation. Specifically, only elements that are direct internal arguments of the verb can undergo PNI. The same condition holds of NI. Baker (1988) argues extensively that the restriction of NI to internal arguments arises because NI obeys the Head Movement Constraint (Travis 1984) and is, in fact, reducible to the ECP. If *both* NI and PNI involve Head Movement, we would expect both to display this condition. Neither NI nor PNI allow incorporation of goal arguments or transitive subjects. Both, however, do permit incorporation of (some) unaccusative subjects in addition to transitive objects.

Despite these surface similarities, there are both conceptual and empirical difficulties for an analysis of PNI which reduces the head-head adjacency requirement to Head Movement plus the requirement that both nominal copies be pronounced simultaneously. Most problematic for extending the Head Movement account of Noun Incorporation to the head-head adjacency effects presented in this chapter is that the head-head adjacency holds in environments from which Head Movement is deemed impossible. Specifically, head-head adjacency requirements are visible on nominals which are not generated as direct complements to the verb and from which noun incorporation is predicted to be ill-formed. Balinese and Malagasy subjects display the same head-head adjacency requirements as PNI objects. The fact that head-head adjacency requirements apply to subjects challenges the application of Baker's (2014) analysis of PNI as Head Movement. The variety of subjects which display head-head adjacency effects cannot be captured under any version of Baker's theory of Noun Incorporation. Under Baker's (1988) approach, accounting for the Balinese and Malagasy data would require lowering of the external argument noun to the verb. This is clearly a violation of head-movement and is strictly disallowed, because the trace of the moved element would not

be properly governed. In subsequent work (Baker 1996), he introduces a new model of incorporation based on m-command rather than c-command in order to accommodate head-incorporation of internal arguments introduced in specifier positions rather than complement positions. Such an implementation is necessary to capture the derived adjacency patterns of Sakha and Tamil, in which the PNI object is generated as a VP-specifier, while the resultative AP/PP is generated as a VP-complement. Although agents are also introduced in specifier positions, Baker strictly rules out the possibility of head-incorporating agents due to economy considerations as presented in Chomsky (1993). In effect, Lowering is the only option on this view, and is ill-formed.

One might wonder if external argument incorporation in Balinese and Malagasy can be handled under a head movement analysis if it is assumed that the external argument incorporates into the verb after the verb undergoes movement to a position where it can c-command the external argument, e.g. T^0 . Such movement would be plausible given the verb-subject word order attested in OV clauses, and a similar mechanism is employed by Baker & Hale (1990) to account for pronoun incorporation in VSO languages. Crucially however, such incorporation is limited to pronouns, as we have seen above the head-head adjacency requirement of Balinese and Malagasy is not. Furthermore, Öztürk (2009), citing personal communication with Mark Baker, states that whether a language has V^0 -to- T^0 movement is irrelevant for its ability to permit noun incorporation. Languages like Mohawk employ V^0 -to- T^0 movement, while Mapudungun does not. Despite this difference, both languages permit noun-incorporation of internal arguments but never external arguments. Given this, arguing that external arguments can incorporate in Balinese and Malagasy because there is V^0 -to- T^0 movement does not comply with cross-linguistic facts of Noun Incorporation.

Furthermore, Baker's condition on coalescence is at odds with cross-linguistic data which reveals that multiple copies of a phrase can be realized simultaneously (Barrie & Mathieu 2014). *Wh*-copy constructions in German and other languages, as in (93), have been taken to be exactly one environment in which multiple copies can be realized simultaneously.

(93) *Multiple spell out in German wh-copy* (Fanselow & Mahajan 1995).

Wen denkst Du **wen** sie meint wen Harold liebt?
who think you **who** she believes who Harold loves
 'Who do you think that she believes that Harold loves?'

Here, more than one copy is spelled out at PF. Nunes (2004) claims that it is precisely only when head movement is available to the *wh*-item that multiple copies can be spelled out. This is based on the observation that *wh*-copy constructions are not available to elements that are clearly phrasal such as *wessen Buch* 'whose book'. Nunes (2004) suggests Linearization statements constrain the order of terminal nodes, but they have nothing to say about the order elements within a complex terminal node. Thus, if *wen* 'who' raises by head movement forming part of a complex head, it is not subject to the LCA. Since it is not subject to the LCA, realizing the element more than once is not problematic for linearization. This is exactly the type of movement that Baker argues takes place in the PNI examples. Thus, Baker's condition on coalescence

appears to be at odds with the realization of multiple copies in *wh*-copy constructions.

I therefore maintain that the analysis of strict linear head-head adjacency as being a prerequisite for licensing without Case under Local Dislocation is in fact the correct means of capturing the head-head adjacency phenomena discussed in Chapter 3 and 4. The common properties between licensing under Local Dislocation and Head Movement arise because both yield an adjunction relationship between the verb and nominal head. Their differences arise, because the timing of adjunction is different. Under Noun Incorporation via Head Movement, adjunction takes place within the narrow syntax where adjacency relations are defined via headedness. As such, non-intervening heads can be avoided, i.e. skipped over, allowing elements like adjectives to be stranded. Under Local Dislocation, adjacency is defined linearly. Any intervening element will prevent adjunction from arising, yielding a Case Filter violation.

Chapter 5

K^0 -insertion: the antipassive

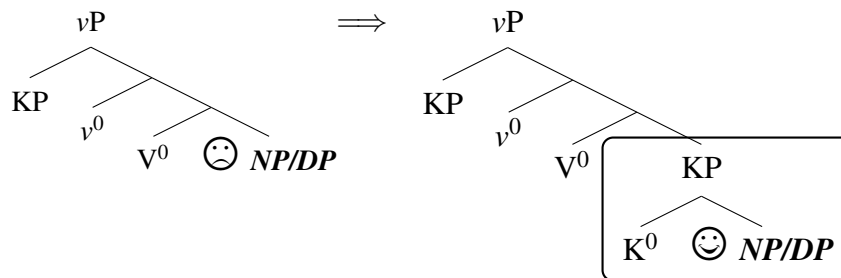
In Chapters 3 and 4, I demonstrated that both pseudo noun incorporation objects and Balinese and Malagasy *in situ* subjects display a surface linear head-head adjacency requirement with the verb. This distributional requirement is unusual and cannot be captured under common analyses of these constructions. I posited that adjacency is necessary because smaller-than-KP nominals have no hope of being licensed on their own. Due to the absence of K^0 , nominals in these environments will never satisfy the proposed Case Filter. Nevertheless, such nominals can obviate the proposed Case Filter by adjoining to the verb. The adjunction process, which may take place at various points in the derivation, renders the noun phrase non-nominal. Part of the verbal extended projection, the nominal is well-formed, so long as the verbal extended projection is complete. Failure to adjoin to the verb triggers ungrammaticality; the proposed Case Filter is violated. A nominal which lacks K^0 , is not an complete extended nominal projection. This conclusion demonstrates that K^0 can be understood as abstract Case. It is the syntactic element of nominals that determines (or at least helps to determine) the form and distribution of nominals. Once abstract Case is properly defined as K^0 , we can see that the absence of Case does play a role in the distribution and form of nominals. By extension, the presence of Case must do so as well. The need for nominals to receive Case still plays a role in determining well-formed derivations.

A question raised by this analysis is what other strategies, if any, can the grammar employ to license nominals that lack K^0 . In this chapter, I discuss another alternative licensing strategy – *K^0 -insertion*. I propose that in the absence of a base-generated KP, a KP-projection can be added to a nominal, that would otherwise trigger ungrammaticality due to their structural reduction, as a means of satisfying the proposed Case Filter. I suggest that K^0 -insertion should be used to model the derivation of *antipassive* constructions. The antipassive and PNI display a number of shared properties. I posit that these similarities arise because in both constructions, a smaller-than-KP nominal enters the derivation. Merger of a structurally reduced nominal accounts for the syntactic and semantic properties shared by these constructions when compared to their canonical transitive counterparts. What distinguishes the two is how their structurally reduced objects are licensed.

5.1 Schematizing K^0 -insertion

As discussed in Chapter 4, conditions on c-selectional variability constrain the base-generation of structurally reduced nominals. A verb, for instance, can select for an NP or DP complement in addition to a KP complement. Such structurally reduced complements violate the proposed Case Filter. If the derivation is to converge, these nominals must be alternatively licensed. Adjunction processes were argued to be one such strategy. I contend that K^0 -insertion, schematized in (1), is another.

(1) *Licensing by K^0 -insertion*



A nominal that is not base-generated as a KP is made a KP by K^0 -insertion. So long as this operation takes place before the proposed Case Filter is evaluated *or* as an obligatory operation occurring after a proposed Case Filter violation is detected, the nominal will satisfy it, and the derivation will converge. A smaller-than-KP nominal projection that becomes a KP is a complete extended projection, satisfying the requirement that all extended projections be complete. The proposed operation of K^0 -insertion displays some similarity to the more familiar operation of *preposition-insertion* – P^0 -insertion. Whereby, the addition of a preposition yields a grammatical construction which would otherwise be ungrammatical. The exact nature of the ameliorating effect provided by the preposition has received different accounts depending upon the analysis of the ungrammaticality of the corresponding prepositionless construction. Some well known instances of P^0 -insertion include English *of*-insertion (e.g. Chomsky 1980, Stowell 1981), Person Case Constraint repairs (e.g. Rezac 2011 and sources therein), and many instances of Differential Object Marking (see Aissen 2003 for an overview). I will discuss the details of (1) more fully as they relate to the phenomenon of the antipassive below. For now, I only outline some of the general properties of the operation.

I posit that K^0 -insertion is a post-syntactic operation. The locus of (some instances of) head-head adjacency was argued to be very late in the derivation, because it is sensitive to linear order. The locus of K^0 -insertion is less empirically clear. There are, however, some conceptual reasons for thinking that it too should occur late in the derivation. First, the proposed operation of K^0 -insertion is counter-cyclic. Structure is not added to extend the root. Rather structure is added within a previously constructed phrase. If something like the Extension Condition (Chomsky 2000, 2001) is operative in syntax, (1) certainly violates it. When the verb takes a smaller-than-KP complement a VP is formed immediately. Subsequently adding K^0 does not extend the VP. Rather, it extends the nominal complement. By placing the operation of K^0 -

insertion post-syntactically, counter-cyclicity in syntax is avoided.¹ Merging K^0 , before the formation of the VP, while not counter-cyclic, would make K^0 -insertion no different than base-generating a KP complement. Second, placing K^0 -insertion in the post-syntax provides a more parsimonious treatment of alternative licensing strategies. As argued in Chapter 4, adjunction via Local Dislocation is also post-syntactic. However the locus of K^0 -insertion cannot be identical to the locus of Local Dislocation. Local Dislocation is sensitive to linear order. If K^0 -insertion is meant to form a KP within which the structurally reduced noun phrase is contained, it must take place when constituent structure is still relevant.

Additionally, I posit that any ‘flavor’ of K^0 can be inserted. Recall from Section 2.1 that K^0 hosts the nominal’s Case-feature. I suggested there that K^0 might come in at least three forms. K^0 could host an unvalued Case-feature – [u Case], K^0 could host an inherently valued Case-feature – [Case], or K^0 could host no Case-feature at all. In principle, the insertion of any instance of K^0 could satisfy the proposed Case Filter. In regard to the antipassive, I will suggest that most often K^0 bearing [Case] is inserted, but that there may be some instances where [u Case] is inserted as well. The behavior of [u Case] when inserted via (1) will also provide an argument for the post-syntactic nature of the operation.

In the remainder of this chapter, I argue that K^0 -insertion should be used to model the derivation of antipassive constructions. I begin by observing a number of commonalities shared between antipassive and PNI constructions.

5.2 Similarities of the antipassive and PNI

Baker (1988) was the first to observe that Noun Incorporation and Antipassive (AP) constructions display a number of similarities. These similarities have motivated a number of analyses that argue that the two should be modeled together. However, in this section, I suggest that the relevant construction for comparison is PNI. I show that PNI and AP constructions share a number of cross-linguistically observable properties. Both display similar alternations in syntax and semantics when compared to canonical transitive clauses. I take these common behaviors to motivate a common analysis. I begin the section by introducing the AP construction in brief, before examining the properties it shares with PNI.

5.2.1 The antipassive

AP constructions are detransitivized constructions with a two-place predicate, derived from a corresponding transitive construction whose predicate is the same lexical item. In the basic transitive construction, the Patient is realized as a direct object; in the AP, that argument is either suppressed or realized as an oblique. The term ‘*antipassive*’ (Silverstein 1972) is meant to indicate that the construction is a mirror image of the passive: in the passive, the Agent is demoted/suppressed. In the AP, the Patient is demoted/suppressed. Examples of transitive/AP alternations are given below.

¹ See Rezac (2011) for a cyclicity-obeying syntax-internal approach to P^0 -insertion. Extending the general logic of this approach may be possible for K^0 -insertion, as well.

(2) *Chukchi transitive/AP alternation* (Kozinsky et al. 1988)

- a. ʔaaček-a kimitiʔ-ən ne-nlʔetete-ən
youth-ERG load-ABS 3PS-carry-AOR.3SO
'The young men carried away the/a load.'
- b. ʔaaček-ət **ine**-nlʔetet-gʔe-t **kimitʔ-e**
youth-ABS AP-carry-AOR.3S-PL **load-INST**
'The young men carried away the/a load.'

(3) *Mam transitive/AP alternation* (England 1983)

- a. Ma Ø-tzaj t-tzyu-ʔn Cheep ch'it
REC 3SA-AUX 3SE-grab-DIR C. bird
'José grabbed the bird.'
- b. Ma Ø-tzyuu-n Cheep **t-iʔj ch'it**
REC 3SA-grab-AP C. **3S-of bird**
'José grabbed a/the bird.'

(4) *Greenlandic transitive/AP alternation* (Sadock 1980)

- a. Angut-ip arnaq unatar-paa
man-ERG woman.ABS beat-IND.3SS/3SO
'The man beat the woman.'
- b. Angut **arna-mik** unatat-a-voq
man.ABS **woman-INST** beat-AP-IND.3SS
'The man beat a woman.'

This derivation of AP predicates is often indicated by dedicated morphology. AP morphology is bolded in the (b) examples above. In many instances, languages make use of AP markers that are syncretic with other categories, thus functioning simultaneously as, for example, detransitivizers or aspect/modality markers (e.g. Polinsky 2015). Syncretism between AP morphology and the morphology of other detransitivizing operations, most commonly reflexivization, as in Pama-Nyungan languages (Australia) (e.g. Austin 1981, Tsunoda 1988, Basilico 2004). Furthermore, the AP predicate can display other characteristics of canonical intransitive predicates; one such characteristic is the change in the agreement pattern, as illustrated by the Chukchi, Mam, and Greenlandic examples above. Object agreement is obscured, yielding 'intransitive' agreement paradigms, despite semantic transitivity. Simultaneously, case alignments also shift, as seen in Chukchi (14) and Greenlandic (16); an ergative-absolutive pattern is replaced with a non-ergative pattern.

In addition to syntactic alternations between canonical transitive and AP clauses, semantic differences are also attested. Prototypical transitive verbs entail that the event they denote triggers a change of state in the Patient (e.g. Tsunoda 1981, Hopper & Thompson 1980, Van Valin 1991, Dowty 1991). The AP cancels this entailment. Rather, the event is understood as incomplete (e.g. Dowty 1991). This accounts for the correlation between the use of the AP and the habitual, durative, iterative, and imperfective (Tchekhoff 1987, Dowty 1991, Cooreman 1994, Dixon 1994, Van den Berg 2001).

In the remainder of this section, I highlight the syntactic and semantic similarities shared by AP and PNI constructions. I use these similarities to motivate a more unified analysis of the two constructions in Section 5.3.

5.2.2 Syntactic similarities

As already noted above, AP constructions display many of the characteristics of intransitive clauses (e.g. Dixon, 1979, 1994; Baker 1988; England 1988; Kozinsky et al. 1988; Siegel 1998; Tsunoda 1988; Isaak 1999; Davies & Sam-Colop, 1990; Dryer 1990; Coorman 1994; Palmer 1994; Ordonez 1995; Campbell 2000; Mithun 2000). They show intransitive verbal morphology, and changes in case-alignment. These properties are also associated with PNI.

Recall first the initial data that motivated the analysis of PNI objects as being structurally reduced. PNI objects lack case morphology, signalling the absence of K^0 and Case-features. This was observed most readily in ergative-absolutive languages like Niuean and Tongan where the absence of case morphology on the object triggered a change in case morphology on the subject. The same shift from an ergative to a non-ergative pattern is attested in AP constructions. Compare the Niuean transitive/PNI alternation (5) to the Chukchi transitive/AP alternation (6).

(5) *Niuean transitive/PNI alternation* (Seiter 1980)

- a. Takafaga tūmau nī e ia e tau ika
 hunt always EMPH **ERG** he **ABS** PL fish
 ‘He is always hunting fish.’
- b. Takafaga ika tūmau nī a ia
 hunt fish always EMPH **ABS** he
 ‘He is always hunting fish.’

(6) *Chukchi transitive/AP alternation* (Kozinsky et al. 1988)

- a. ?aaček-**a** kimiti?-**ən** ne-nl?etete-ən
 youth-**ERG** load-**ABS** 3PS-carry-AOR.3SO
 ‘The young men carried away the/a load.’
- b. ?aaček-**ət** ine-nl?etet-g?e-t kimit?-e
 youth-**ABS** AP-carry-AOR.3S-PL load-INST
 ‘The young men carried away the/a load.’

In both cases, the transitive clause (5a) and (6a) displays an ergative-absolutive pattern, marking the transitive subject to the exclusion of transitive objects and intransitive subjects. In PNI constructions (5b) and AP constructions (6b), the ergative pattern is replaced by a non-ergative one. Absolutive morphology is realized on the subject in both (b) examples.

Early work on APs claimed a link between the AP and ergativity (e.g. Silverstein 1976, Dixon 1979, Spencer 1991), observing that the construction was (at that time) only attested in ergative languages. At

times, this correlation has been taken to its furthest end, with some claiming that only syntactically ergative languages display AP constructions (e.g. Otsuka 2000). However, subsequent research has discovered that the AP is not limited to ergative languages (e.g. Heath 1976, Postal 1977, Davies 1984; Givón 1984, Lidz 1996). Polinsky (2013) lists a number of non-ergative languages that display AP constructions, including: Acoma, Cahuilla, Canela-Krahô, Chamorro, Choctaw, Comanche, Cree, Kiowa, Koyraboro Senni, Krongo, Lango, Lavukaleve, Nez Perce, Ojibwa, Paiwan, Sanuma, Thompson. Even more familiar languages, such as German (Müller 2011), Romance languages (Postal 1977, Mejias-Bikandi 1999, Medová 2008), and Slavic languages (Say 2005, Medová 2008), have been argued to display APs.

Uto-Aztec languages provide some of the clearest evidence that nominative-accusative case-marking languages display AP constructions – e.g. Cahuilla (Seiler 1977), Shoshone (Dayley 1989), Comanche (Charney 1993), Northern Paiute (Thornes 2003), and Ute (Givón 2011). Just as in PNI, AP constructions surface regardless of case-alignment. Compare the Sakha transitive/PNI alternation (7) to the Northern Paiute transitive/AP alternation (8).

(7) *Sakha transitive/PNI alternation* (Baker 2014)

- a. Masha salamaat-y türgennik sie-te
M.NOM porridge-ACC quickly eat-PST.3S
'Masha ate the porridge quickly.'
- b. Masha türgennik salamaat sie-te
M.NOM quickly porridge eat-PST.3S
'Masha ate porridge quickly.'

(8) *Northern Paiute transitive/AP alternation* (Thornes 2003)

- a. Ni midı kuhani
1S.NOM meat.ACC cook
'I am cooking meat.'
- b. Ni tu-kuhani
1S.NOM AP-cook
'I am cooking.'

In both Sakha (7) and Northern Paiute (8), case morphology on the subject is constant regardless of the absence of case on the object in (7b) or an object altogether (8b).² It remains nominative. This contrasts with ergative-absolutive alignments in Niuean and Chukchi, but it is entirely expected. The realization of nominative case is independent of the presence of another argument in the clause in need of (structural) case. Consequently, it always surfaces on the subject.

Another syntactic behavior shared by PNI and AP constructions, when compared to their transitive counterparts, is the obviation of object agreement. Consider agreement patterns in Mittimatalik (Inuit) (9).

² A common property of the AP in Uto-Aztec languages is that they require an implied internal argument. No argument can surface as an oblique.

(9) *Mittimatalik argument agreement* (Spreng 2012)

- a. Anguti-up arnaq kunik-**taa**
man-ERG woman.ABS kiss-PRT.**3SS/3SO**
'The man kissed the woman.'
- b. Anguti niri-**vuq**
man.ABS eat-IND.**3SS**
'The man is eating.'

Transitive agreement morphology (9a) cross-references the absolutive and the ergative marked argument for person and number. Intransitive agreement (9b), cross-references the sole argument (e.g. Spreng 2012). Like the intransitive construction (9b) and unlike its canonical transitive counterpart (9a), the AP in (10) displays intransitive agreement cross-referencing the subject only, despite the presence of a logical object.

(10) *Inuit APs display intransitive morphology* (Spreng 2012)

- Anguti kunik-si-**vuq** (arna-mik)
man.ABS kiss-AP-IND.**3SS** (woman-INST)
'The man is kissing a woman/someone.'

In the AP construction, object agreement is absent. The portmanteau morpheme that is realized in syntactically transitive clauses is not available in AP. Rather, intransitive agreement morphology is present.

The Mayan language Kaqchikel displays another instance of the lack of object agreement in the AP. Recall from Chapter 2 that Kaqchikel is an ergative, head-marking language. It has no case morphology, but displays ϕ -agreement that cross-references the person and number of subject and object. The same set of morphemes is used to cross-reference the object of transitive verbs and the subject of intransitive verbs, signaling an ergative agreement alignment. For example, the transitive verb in (11a) has a third-plural morpheme cross-referencing the subject 'they' and a second-singular morpheme cross-referencing the object 'you'. The intransitive verb in (11b) has one agreement morpheme cross-referencing 'you'. Notice that the same morpheme, *-a(t)-*, appears as the realization of second-singular agreement for the transitive object in (11a) and the intransitive subject in (11b).

(11) *Kaqchikel agreement alignment* (Erlewine 2014)

- a. X-**at-ki-tz'**ët
CM-**2S.ABS-3P.ERG**-see
'They saw you.'
- b. X-**a-wär**
CM-**2S.ABS**-sleep
'You slept.'

Comparing a canonical transitive (12a) to its AP counterpart (12b), we see again that object agreement, present in the transitive, is obviated in the AP.

(12) *Kaqchikel AP obviates object agreement* (McKenna Brown et al. 2006):

- a. X-**at-in-tz**'ët
CM-2S.ABS-1S.ERG-see
'I saw you.'
- b. Y-**i-tz**'et-on (aw-ichin)
INC-1S.ABS-see-AP (2S-OBL)
'I see (you).'

The pattern of object agreement obviation in the AP is also attested in the Chukchi data, as in (19).

PNI languages that cross-reference the object on the verb in canonical transitives also lack this agreement morphology in PNI clauses, despite the presence of a logical object. Such behavior is attested in the Oceanic languages of Hoava, Marovo, and Roviana among others (e.g. Lynch et al. 2002). I provide data below from Hoava (Davis 2003). Hoava like Niuean and Tongan is a VSO language. In canonical transitives, a morpheme cross-referencing the person and number of the object appears at the edge of the VP.

(13) *Hoava object agreement* (Davis 2003)

- a. So tavet=**ia** eri kamade sa keke royaroya yele
then work=**3SO** ART four ART one ladder long
'Then they four made a long ladder.'
- b. Koni tavete su-sua paki=**a** rao sa vose dae...
FUT work RED-be.first initially=**3SO** 1S ART paddle finish
'I will make the paddle first of all...'

There has been some disagreement in the Oceanic literature as to whether morphology cross-referencing the object is best analyzed as object agreement (e.g. Lynch et al. 2002) or as an object doubling enclitic (e.g. Palmer 1999, 2011; Evans 2008). The variable position of the marker as seen in (13) – appearing on the verb in (13a) but on an adverb in (13b) – would suggest that it is a clitic.

Hoava displays PNI signalled by a shift from VSO to VOS word order (14). This same shift was observed in Niuean, Tongan and Chol. identifiable by the absence of the object clitic – the so-called ‘intransitive’ verb form, and placement of the logical object noun before the subject, as in (14).

(14) *Hoava noun incorporation obscures agreement* (Davis 2003)

- a. Hiva napo **kolo manjini** ba rao na
want drink **water be.hot** EMPH 1S DEM
'I want to drink hot water.'
- b. Tavete **parika na tupi** eri kahike
work **bow and arrow** ART three
'They three made bows and arrows.'

PNI objects in Hoava display a number of by now familiar characteristics of the construction. Such objects may carry modifiers (14a) and be conjoined (14b), but they must remain in a verb-adjacent position, and

they must be interpreted as indefinite (Palmer 2011).

Strikingly, in the PNI constructions (14), object-marking within the VP is absent. The verbs in (14a,b) bear no clitics. The fact that object agreement is obscured entirely and not realized as some default in Hoava PNI provides further evidence that it is clitic-doubling and not ‘true’ agreement (e.g. Preminger 2009, Kramer 2014). PNI and AP constructions then can both be seen to obscure object agreement that is present in transitive clauses. This conclusion can be maintained regardless of whether object agreement is true agreement or clitic-doubling, so long as it is maintained that clitic-doubling first requires the establishment of ϕ -agreement with the argument to be doubled (e.g. Béjar & Rezac 2003, Harizanov 2014, Kramer 2014).

Finally, both AP and PNI constructions can be signalled with special verbal morphology – one of the hallmarks of AP constructions. Consider some examples repeated from above.

(15) *APs bear special verbal morphology*

- a. *Chukchi* (Kozinsky et al. 1988)
ʔaaček-ət **ine**-nlʔet-et-gʔe-t kimitʔ-e
youth-ABS AP-carry-AOR.3S-PL load-INST
‘The young men carried away the/a load.’
- b. *Kaqchikel* (McKenna Brown et al. 2006)
Y-i-tz’et-**on** (aw-ichin)
INC-1S.ABS-see-AP (2S-OBL)
‘I see (you).’
- c. *Mittimatalik* (Spreng 2012)
Anguti kunik-**si**-vuq (arna-mik)
man.ABS kiss-AP-IND.3SS (woman-INST)
‘The man is kissing a woman/someone.’

In Chukchi (15a), AP is signaled by the verbal prefix *ine-*. In Kaqchikel (15b), the suffix *-on* is employed. In Mittimatalik (15c), the suffix *-si* appears.

In the majority of languages that mark the antipassive verbally, the affix is syncretic with other categories as well (e.g. Polinsky 2015). Two typical patterns of syncretism are attested.

(16) *AP morphology is syncretic with ...* (Polinsky 2015)

- a. Detransitivizing affixes such as anticausative, reflexive/reciprocal, middle, or passive markers.
e.g. Chukchi (Kozinsky et al. 1988), Diyari (Austin 1981), Halkomelemem (Gerds & Hukari 2005, 2006), some Pama-Nyungan languages (Dixon 1972, 1977; Terrill 1997), Kiowa (Watkins 1984).
- b. Aspectual markers, most commonly inchoative, inceptive, or iterative.
e.g. Bezhta (Comrie et al. 2015) or Eskimo/Inuit (Spreng 2012; Basilico 2012)

I will return to these facts in Section 5.3 to discuss why these forms of syncretism are realized.

In Chapter 3, we also saw an instance of PNI accompanied by special morphology. The Pama-Nyungan language Diyari (Australia) has a general detransitivizing suffix *-tadi* (Austin 1981). In a subclass of verbs (Austin’s class 2C), both the subject and object of a verb suffixed with *-tadi* seem to be in the absolutive form, with SOV word order. Absolutive case has no overt morphology.

(17) *Diyari PNI* (Austin 1981)

- a. Nulu kaṇa-li nina ṇanti ṭayi-yi
 DEM.ERG person-ERG DEM.ABS meat.ABS eat-PRS
 ‘The man is eating this meat.’
- b. Nawu kaṇa nina ṇanti ṭayi-tadi-yi
 DEM.ABS person.ABS DEM meat eat-TADI-PRS
 ‘The man is having a feed of this meat.’

While the objects in (17a) and (17b) both appear absolutive, they are not. The object in (17a) can be separated from the verb and scrambled, the object in (17b) occupies a fixed position. Also, (17a) answers the question, *Who ate the meat?*, whereas (17b) answers, *What is the man doing?* (Austin 1981). The noun+verb unit in (17b) seems syntactically inseparable, yet does not form a lexical item. As noted by Polinsky (2015), this indicates the object in (17b) is not absolutive, but a caseless PNI object, capturing its non-mobility. Like Niuean and Tongan PNI, the realization of a structurally reduced nominal yields a non-ergative pattern and requires the object to remain verb-adjacent, and like AP constructions special morphology is employed in Diyari PNI.

One observable difference between AP and PNI constructions to make note of here is the relative commonness of special morphology that accompanies AP constructions and the relative rarity of similar morphology that accompanies PNI constructions. Aside from Diyari, I have not found any other PNI languages that display special morphology. Similarly, I know of no unambiguous instances of null AP morphology.³

³ Inuit languages have been claimed to display allomorphy between overt and non-overt AP morphology (e.g. Bittner 1987, 1991; Bok-Benemma 1991). Certain verb types take oblique objects, without realizing AP morphology, as in (i).

(i) *AP without AP morphology?* (Spreng 2006)

- a. Anguti niri- \emptyset -vuq niqi-mik
 man.ABS eat- \emptyset -IND.3SS meat-INST
 ‘The man is eating meat.’
- b. Piita aqut-(*si)-juq unakkuuruti-mik
 P.ABS drive-(*AP)-PRT.3SS car-INST
 ‘Peter is driving a car.’

The examples in (i) display many of the hallmarks of AP constructions; they display a non-ergative case pattern, intransitive agreement, and realize the object as oblique. Only AP morphology is absent. However, Spreng (2006, 2012) objects to the AP allomorphy analysis of these constructions, because the distribution is entirely predictable from argument structure, and not morphophonological factors. All and only those predicates that are optionally transitive, being realized as an unergative otherwise, are able to surface without AP morphology. An analysis that assumes that there is always an AP morpheme, either zero or overt, cannot explain the distribution of the overt versus the non-overt version of the AP morpheme. Furthermore, Spreng (2006) provides phonological evidence suggesting the absence of the morpheme altogether rather than it simply being null. In the presence of

I have nothing reassuring to say about why the two constructions which display a number of otherwise similar properties should differ in this way. One suggestion, however, would be to reexamine the constructions claimed to be APs, it may be that at least some are better analyzed as PNI constructions. It would be especially hard to distinguish the two in environments when the indirect object is not realized overtly. Similarly, constructions that are in fact best understood as APs may sometimes be misanalyzed as other kinds of constructions, when dedicated AP morphology is absent.

This section has illustrated that a number of syntactic similarities are shared by PNI and AP constructions when compared to their transitive counterparts. Both trigger changes in case and agreement, and both *can* display additional, verbal morphology. Semantic similarities between the two constructions are also attested. These are detailed below.

5.2.3 Semantic similarities

Structural reduction of PNI objects is (often) accompanied by changes to the semantic interpretation of those arguments. PNI objects that are observably NPs, disallowing elements associated with the DP-layer, are also interpreted as NPs, i.e. as narrowest scope indefinites. However, those PNI objects that are larger than NP receive the interpretation of DPs. The same semantic possibilities are expressed by AP objects. In some cases, they must receive narrowest scope indefinite interpretations, but in other instances they do not. Furthermore, in AP and PNI, the event expressed by the clause takes on a generally atelic interpretation. These semantic similarities further strengthen the connections between AP and PNI constructions, which will motivate a common analysis for the two phenomena.

AP objects often receive an indefinite or non-specific interpretation (e.g. Kalmar 1979, Kozinsky et al. 1988, Rude 1988, Tsunoda 1988, Dryer, 1990, Cooreman 1994, Palmer 1994, Campbell 2000, Mithun 2000, Aldridge 2012, Polinsky 2015). Consider the South Baffin sentences below. The AP construction is employed in (18a) to introduce a referent into the discourse. Since this is its first mention in the discourse, the object is oblique and indefinite. In (18b), the object is referred to again. (18b) is a transitive construction; the object is absolutive, and is definite (Aldridge 2012).

(18) *AP objects are indefinite* (Kalmar 1979)

- a. Joosi quqiq-si-yup tuttu-mik
 J.ABS shoot-AP-PRT.3SS caribou-INST
 ‘Joosi shot a caribou.’
- b. Joosi-up quqi-kkaniq-tanga tuttu
 J-ERG shoot-again-PRT.3SS/3SO caribou.ABS
 ‘Joosi shot the (same) caribou again.’

certain verbal suffixes the final consonant of the verb root is deleted. This deletion is blocked by overt AP morphology, but not by alleged null AP morphology. Spreng takes this to imply that there is no interfering element between root and suffix. Spreng (2012) suggests that the constructions in (i) are better analyzed as conatives.

This interpretive asymmetry between AP and canonical transitive objects is mirrored in PNI. Recall the data from Sakha introduced in Chapter 3 and repeated below in (19).

(19) *Sakha PNI affects nominal interpretation* (Baker 2014)

- a. Masha **salamaat-y** turgennik sie-te
M.NOM **porridge**-ACC quickly eat-PST.3S
'Masha ate the porridge quickly.'
- b. Masha turgennik **salamaat** sie-te
M.NOM quickly **porridge** eat-PST.3S
'Masha ate porridge quickly.'

In the canonical transitive clause (19a), the direct object is marked with accusative case, and receives a specific interpretation. In the PNI counterpart (19b), the direct object no longer bears case and receives a non-specific interpretation.

It is not the case, however, that PNI or AP objects are necessarily interpreted as indefinite. For instance, AP objects in Mayan can be pronominal, as the data from Kaqchikel (20) illustrates.

(20) *Kaqchikel AP objects can be definite* (McKenna Brown et al. 2006)

- a. X-at-in-tz'ët
CM-2S.ABS-1S.ERG-see
'I saw you.'
- b. Y-i-tz'et-on (aw-ichin)
INC-1S.ABS-see-AP (2S-OBL)
'I see (you).'

Similarly, certain Inuit languages (e.g. Labrador Inuttut) have been shown to permit definite AP objects like proper names, as in (21) (e.g. Johns 2006).⁴

(21) *Labrador Inuttut AP objects can be definite* (Johns 2006)

- Margarita kuinatsa-i-juk Ritsati-mik
M.ABS tickle-AP-3SS R.-OBL
'Margarita is tickling Richard.'

The same effect can be found in PNI. As noted in Chapter 3, Diyari PNI objects host DP-level material, and receive a definite interpretation, suggesting they are DPs (22).

⁴ Wharram (2003) reports that the use of proper names in Inuit APs have a similar meaning to the use of proper names in Chol PNI. An example like (21) is said to mean that Margarita is tickling one person named Richard out of a group of people named Richard. However, Johns (2006) reports that the proper name in (21) has a definite reference.

(22) *Diyari PNI* (Austin 1981)

- a. Nulu kaṇa-li nina ṇanti tayi-yi
DEM.ERG person-ERG DEM.ABS meat.ABS eat-PRS
'The man is eating this meat.'
- b. Nawu kaṇa nina ṇanti tayi-tadi-yi
DEM.ABS person.ABS DEM meat eat-TADI-PRS
'The man is having a feed of this meat.'

Another asymmetry shared by AP and PNI objects when compared to canonical transitives is in their scope taking possibilities. For instance, absolutive objects in semantically transitive clauses like (23a) take wide scope over necessity modals, while oblique objects in APs like (23b) scope under such elements (e.g. Bittner 1987, 1994; Benua 1995; Basilico 2003).

(23) *Scope alternations in West Greenlandic* (Bittner 1994)

- a. Atuartu-t ila-at ikiur-tariaqar-para
student-P.ERG part-3P.S help-must-IND.1SS/3SO
'There is one of the students that I must help.'
- b. Atuartu-t ila-an-nik ikiu-i-sariaqar-punga
student-P.ERG part-3P.S-INS help-AP-must-IND.1SS
'I must help one of the students (any one will do).'

The direct object of the transitive clause is interpreted as a specific indefinite, while the same argument in an AP clause is interpreted as a non-specific indefinite.

PNI objects also take narrowest scope. For instance, Tamil PNI objects must take narrow scope with respect to negation (24a), repetitive adverbs (24b), and imperfective aspect (24c) (Baker 2014).

(24) *Tamil PNI internal arguments are narrowest scope indefinites* (Baker 2014).

- a. Naan pustagam vanga-lle. (#Adu meese mele iru-kk-itu.)
I book buy-NEG. (it table on be-PRS-3NS
'I didn't buy (any) book.' (#It is on the table.) [$\exists > \neg$; $*\neg > \exists$]
- b. Naan tirumba tirumba pustagam vang-an-een
I again again book buy-PST-1SS
'I bought book(s) again and again.' (A different book each time.)
- c. Paale vari sim-aa avenge ponnu paa- t t-ange
a.lot year-ADV they girl see-PST-3PS
'For many years they have been seeing girl(s).' (Different ones different times.)

However, such scope differences *are not* associated with the AP crosslinguistically. Polinsky (2015) provides data from Adyghe (Northwest Caucasian) in which both transitive and AP clauses with an oblique object are ambiguous between surface and inverse scope.

(25) *Adyghe APs permit scope variability* (Polinsky 2015)

- a. Pšaše-m zeč'e-r-jə pjəsmə(-xe)-r 0-ə-txə-β
girl-ERG all-ABS-ADD letter(-PL)-ABS 3.ABS-3S.ERG-write-PST
'A/The girl wrote all the letters.' [∃ > ∀; ∀ > ∃]
- b. Pšaše-r zeč'e-m-jə pjəsmə(-xe)-m 0-txa-βe
girl-ABS all-ADD-OBL letter(-PL)-OBL 3.ABS-write.AP-PST
'A/The girl wrote all the letters.' [∃ > ∀; ∀ > ∃]

This variability in interpretation is expected if both NPs and DPs are structurally reduced. In the absence of K^0 , both will alter case and agreement patterns, but DP arguments contribute a distinct semantics from NP arguments. NPs are interpreted as predicates. DPs are interpreted as entities or generalized quantifiers.

Lastly, aspectual relations such as telicity are involved in transitive and AP alternations. APs often trigger changes to canonical aspectual interpretations. These changes result in inchoative, inceptive, durative, progressive, imperfective, and/or iterative meanings (e.g. Tsunoda 1981, 1988; Tchekoff 1987; Kozinsky et al. 1988; Dowty 1991; Cooreman 1994; Dixon 1994; Palmer 1994; Benua 1995; Siegel 1998; Spreng 2010, 2012; Aldridge 2012). Typically, the described event is less complete in an AP. Regardless of specific interpretation, the AP may be generally associated with atelicity (Polinsky 2015). The object in the Chukchi AP (26b) is less affected by the action of the verb than the object in the transitive construction (26a).

(26) *Chukchi transitive/AP alternations affect telicity* (Palmer 1994)

- a. ətleg-e keyng-en penre-nen
father-ERG bear-ABS attack-AOR.3SS/3SO
'Father attacked the bear.'
- b. ətleg-en penre-tko-g'e kayng-ete
father-ABS attack-AP-AOR.3SS bear-DAT
'Father ran at the bear.'

A second example of relationship between AP and atelicity can be found in Yucatec Maya. Verbs in Yucatec Maya are by default either perfective or imperfective. Only the opposite aspect is marked overtly. Perfective verbs are marked as imperfective when used in an imperfective construction while imperfective verbs are marked as perfective in order to achieve a perfective reading. For instance, the verb *héekʔ* 'break' is by default perfective (Krämer & Wunderlich 1999). However, in the AP, if it is to be interpreted as perfective, it needs to be overtly marked, as in (27).

(27) *Yucatec Maya APs are inherently imperfective* (Krämer & Wunderlich 1999)

- a. K=n héekʔ
INCOMP=1 break.AP
'I am breaking it/something.'
- b. Héekʔ-n-ah-en
break.AP-N-PRF-1
'I have broken.'

Perfective morphology counteracts the canonical reading of the AP, illustrating it is inherently imperfective.

PNI constructions too display atelic aspectual properties. Dutch PNI requires a habitual interpretation (e.g. Booij 1990, 2008; Kooij & Mous 2002). In Dutch, PNI can be hard to detect, because an unmarked object may be interpreted either as an NP or a KP with a null determiner. A N^0+V^0 combination like *koffie zetten* ‘make coffee’ can receive the interpretation of a canonical transitive VP. Booij (2008) notes that this possibility is confirmed by the fact that the negative determiner *geen* must be used in the negative versions of such sentences (28a). The negative adverb *niet* is used, if an intransitive verb has to be negated (28b).

(28) ***Dutch bare nouns can be KPs*** (Booij 2008)

- a. Jan zet geen/*niet koffie
J. makes no/*not coffee
‘John does not make coffee.’
- b. Jan speelt niet
J. plays not
‘John does not play.’

The use of the negative determiner *geen* presupposes the presence of a KP. Hence, these bare nouns have KP-status. However, besides negation with *geen*, negation with *niet* is possible in syntactic contexts in which the N^0 and the V^0 are adjacent (Booij 2008), a by now familiar requirement of PNI objects, as in (29)

(29) ***Dutch bare nouns can be PNI objects*** (Booij 2008)

- ... dat Jan geen/niet koffie zet
... that John no/not coffee makes
‘John does not make coffee.’

This behavior can be captured if verb phrases like *koffie zetten* can receive two distinct interpretations. (i) They form regular KPs when *geen* is used. (ii) They are PNI objects when *niet* is used (Booij 2008).

Booij reports that there is a difference in the use of these two constructions, which can be illustrated by the following sentences both meaning ‘John cannot make coffee’. Sentence (30a) is ambiguous, unlike (30b). In (30a), *koffie zetten* denotes either an event or a habitual action, but in (30b), a case of PNI (as proven by the use of *niet* as a negative adverb), *koffie zetten* can only denote a habitual action. This difference in telicity is confirmed by the semantic bizzareness of the temporal adjunct *vandaag* ‘today’ in (30b).

(30) ***Dutch PNI affects telicity*** (Booij 2008)

- a. Jan kan (vandaag) geen koffie zetten
J. can (today) no coffee make.NF
‘John cannot make coffee today.’
- b. Jan kan (#vandaag) niet koffie zetten
J. can (#today) no coffee make.NF
‘John cannot make coffee (today).’

The PNI predicates function as intransitive predicates that denote a habitual activity. (30a) may be felicitously spoken in a situation where there is no coffee available, whereas (30b) may be used in a scenario in which John does not know how to make coffee. Similar observations are made for Niuean PNI; they have a habitual, durative, or frequentive interpretation (Seiter 1980, Massam 2001, Clemens 2014).

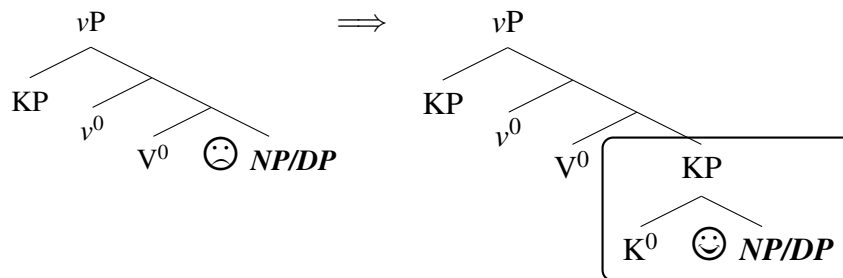
In regards to their semantics, AP and PNI can be contrasted with canonical transitive constructions. The former denote an atelic event and often require their objects to be understood as non-specific or indefinite, though in both PNI and AP environments there appears to be cross-linguistic variation in the interpretation of the object. I take these similarities to motivate a common analysis for the two constructions.

5.3 Deriving AP constructions

As discussed in Section 5.2, AP and PNI constructions share a number of common properties. Both are syntactically intransitive, displaying case and agreement alternations when compared to their canonically transitive counterparts. Furthermore, both can display special verbal morphology, though such morphology is more commonly associated with AP. Semantically, these constructions denote an atelic event and often require their objects to be understood as non-specific or indefinite. These similarities, I maintain, should be taken to motivate a common analysis for the two constructions.

In this section, I extend the analysis of PNI to AP constructions. Just like PNI, AP constructions are formed when a structurally reduced object argument enters the derivation. As discussed in Chapter 4, conditions on *c*-selectional variability constrain the merger of structurally reduced nominals. It is this choice that triggers all of the syntactic and semantic effects associated with the AP and PNI constructions. The two constructions can then be understood to differ in one crucial respect – the licensing of the Caseless object. In PNI constructions, the Caseless object is licensed under head-head adjacency with the verb, as discussed in Chapters 3 and 4. In AP constructions, I posit that the Caseless object is licensed via K^0 -insertion. In the absence of K^0 , a violation of the proposed Case Filter will be triggered. Unless an alternative licensing strategy is employed. The K^0 -insertion schema is repeated below in (31).

(31) *Licensing by K^0 -insertion*



The smaller-than-KP nominals satisfies the proposed Case Filter by being made a KP.

One of the most visible differences between AP and PNI constructions is how their objects are marked. PNI objects lack K^0 and case morphology. AP objects are overtly marked, suggesting the presence of K^0 . As the data in Section 5.2 illustrates, the objects of AP constructions are (often) realized in oblique environments. If licensing of the AP object requires K^0 -insertion, then the realization of the direct object as oblique comes from its realization within the KP that licenses it. I follow previous researchers in positing that (some) oblique elements that might appear prepositional are better understood as inherently valued K^0 (e.g. Lamontagne & Travis 1987, Tremblay & Kabbaj 1990, Guerssel 1992, Bittner & Hale 1996a,b; see also Larson 1985). AP objects are oblique, because they are realized in an oblique environment. The oblique morphology can be captured either as the realization of an inserted inherently valued K^0 , or as contextual allomorphy on the reduced nominal when realized within an inherently valued KP.

If a K^0 bearing [*uCase*] were inserted post-syntactically, as in (31), we would expect the AP object to be marked with unmarked case. Recall from Chapter 2 that unmarked case is the realization of [*uCase*]. This possibility may be at play in *bi-absolutive* constructions. Descriptively, bi-absolutive constructions are semantically transitive clauses in ergative-absolutive languages that realized both arguments in the absolutive case. Polinsky (2015) suggests that some bi-absolutive constructions may be antipassives.⁵ If, at least, some bi-absolutives are antipassives, the present proposal can capture the attested case pattern. In the narrow syntax, where case assignment is determined, only one argument bears a Case-feature, resulting in an absolutive case realization. Only post-syntactically is the second Case-feature added upon K^0 -insertion. If ergative case assignment is conditioned on the presence of another nominal that can receive (structural) case *in the narrow syntax*, the addition of [*uCase*] occurs too late for the realization of ergative case morphology on the subject. Both arguments will bear [*uCase*], and both will be marked with absolutive case.

In the remainder of this section, I detail how the current proposal captures the syntactic and semantic properties of AP (and PNI) constructions. Throughout the presentation, I highlight where the analysis differs from previous analyses, and discuss the advantages of the current proposal. It should be noted that the proposed analysis captures those AP constructions that display the properties discussed above. I will note some environments in which APs cross-linguistically diverge from this general pattern, offering, where possible, plausible means of capturing these facts. This is not intended, however, to be an analysis that will capture the behavior of all APs in all languages. Some cross-linguistic differences may require alternative accounts. The proposed analysis captures many of the common characteristics of AP constructions. It should also be noted that certain linguistic phenomena resemble AP constructions, and have been termed and/or analyzed as such in previous literature. For instance, the Mayan Agent Focus construction has been described as an antipassive (e.g. Larsen & Norman 1979, Dayley 1981). Blight (2004) analyzes English conative, unexpressed object, and preposition-drop as transitive/AP alternations. Also, some inverse agreement contexts have been termed antipassives (e.g. Comrie 1979, 1980; Nedjalkov 1979; Keen 1983). All of these constructions display similarities with the AP. However, there are reasons to think that these constructions should

⁵ It would be tempting to treat all such constructions as antipassives (e.g. Forker 2012 on Daghestanian), but see Coon (2013) and Gagliardi et al. (2014) for arguments that the syntax of bi-absolutives varies cross-linguistically.

be distinguished (see Polinsky 2015 for a discussion of these phenomena). Some aspects of the proposed analysis may be extended to these constructions.

5.3.1 Syntactic consequences of NP/DP merger

I now demonstrate how merger of a smaller-than-KP nominal can capture the syntactic properties of AP (and PNI) clauses compared to canonical transitives.

I have already mentioned how the proposed analysis captures the oblique form of the AP object. If licensing of the object of an AP construction requires K^0 -insertion, then the realization of the direct object as oblique comes from the environment in which it is licensed. Oblique morphology is attributed to the inherently valued Case-feature of the inserted K^0 .

Alternatively, the AP object can be null. This variability was displayed in a number of languages above, and is repeated here for Kaqchikel (32).

(32) *Kaqchikel AP objects are oblique or null* (McKenna Brown et al. 2006)

Y-i-tz'et-**on** (aw-ichin)
INC-1S-see-AP (2S-OBL)
'I see (you).'

I propose that null AP objects are implicit arguments. A major issue regarding implicit arguments is how, and where, they are to be modeled. Answers vary widely (see, e.g., Epstein 1984; Williams 1985, 1987; Chomsky 1986; Rizzi 1986; Brody & Manzini 1987; Jackendoff 1987; Roeper 1987; Safir 1991; also see Bhatt & Pancheva 2006 for a review). I will not attempt to address the nature of implicit arguments here.⁶ For present purposes, I posit that languages that obligatorily require implicit arguments in the AP do not otherwise permit the merger of structurally reduced nominals. The only options for merger are full KPs that will not trigger the formation of AP constructions, and implicit arguments that do trigger AP constructions. Unlike overt NP/DP complements, implicit arguments will not need to be licensed, and as such will not trigger K^0 -insertion. Languages that show greater variability permit the merger of *both* overt structurally reduced nominals and implicit arguments.

The parallel with PNI objects is maintained with respect to null internal arguments as well. Niuean null objects also participate in transitive/PNI alternations, as in (33).

⁶ See Landau (2010) and Marti (2010) for recent approaches.

(33) *Niuean displays transitive/PNI alternations with null objects* (Massam et al. 2012)

- a. Ko e mate hanefai a koe he kai e au !
PRED C die about-to ABS 2S when eat **ERG 1S** !
'You are about to die when I eat (you)!'
- b. Ko e mena fai fakafiliaga e lago ka kaiha \emptyset taha tagata
PRED C thing make court.of.justice ABS fly COND.FUT steal **ABS SG.NSPEC man**
'This was the way flies made justice when a man stole (things).'

Just as in overt transitive/PNI alternations, in the examples above, there is a correlation between specificity of the null object and case for the subject. If and only if the null object is specific, is there ergative case on the subject. Null objects that receive a specific interpretation require ergative case on the subject, as in (33a). Null objects that receive a generic/non-specific interpretation require absolutive case on the subject, as in (33b) (Massam et al. 2012).⁷ This pattern is identical to the transitive/PNI alternation. Canonical transitive subjects receive a definite/specific interpretation while PNI objects receive a non-specific interpretation. This suggests that null arguments like overt arguments can be full KPs or reduced nominals. Full KP null arguments may be *pro* while reduced null arguments may best be modeled as implicit arguments.

The current proposal also immediately captures the changes in case and agreement in transitive/AP alternations. Recall first that ergative-absolutive patterns become non-ergative in the AP. Data from Chukchi is repeated below.

(34) *Chukchi transitive/AP alternation* (Kozinsky et al. 1988)

- a. ?aaček-**a** kimiti?-**ən** ne-nl?etete-ən
youth-**ERG** load-**ABS** 3PS-carry-AOR.3SO
'The young men carried away the/a load.'
- b. ?aaček-**ət** ine-nl?etet-g?e-t kimiti?-e
youth-**ABS** AP-carry-AOR.3S-PL load-INST
'The young men carried away the/a load.'

The transitive subject in (34a) is marked with ergative case, while the same subject in the AP, (34b), is marked with absolutive case. This alternation falls out from merger of a structurally reduced nominal in object position. Recall that ergative case (often) requires the presence of another nominal that will receive absolutive case, in the clause (e.g. Yip et al. 1987, Marantz 1991, Massam 2001, McFadden 2004, Bobaljik 2008, Woolford 2008). Its realization conditioned by the presence/absence of another KP in a local domain. A particular means of encoding this requirement for ergative case assignment is presented in Chapter 6. In (33a), the requisite structure for ergative case is achieved, resulting in the presence of ergative case on the subject KP, and absolutive case on the object KP. However, given the proposal that AP constructions merge direct objects smaller than KP, there is only one KP within the ν P, in (33b). The conditions for ergative

⁷ Absolutive case is not realized overtly on the subject in (33b), because it can be dropped in the presence of the indefinite article *taha* (Seiter 1980).

case assignment are not met, the subject KP can only receive unmarked case. Crucially, the NP/DP object receives no C/case. K⁰-insertion triggers the realization of oblique marking, in this instance instrumental, on the direct object. In nominative-accusative languages with AP constructions, merger of a structurally reduced object does not affect the case of the subject KP. This is because nominative, like absolutive, is unmarked. It will surface on any KP that does not receive either lexical/oblique or dependent case. We expect to find no case alternation on transitive and AP subjects in nominative-accusative alignments.⁸

In conjunction with a change in case alignment comes an alternation in agreement in AP constructions. In languages which display object agreement in canonical transitives, this agreement is obscured in the AP. In Inuit languages, the transitive portmanteau agreement morphology, cross-referencing both arguments, is replaced by intransitive agreement, targeting only the subject in the AP.

(35) *Mittimatalik transitive/AP agreement alternations* (Spreng 2012)

- a. Anguti-up arnaq kunik-**taa**
 man-ERG woman.ABS kiss-PRT.**3SS/3SO**
 ‘The man kissed the woman.’
- Anguti kunik-si-**vuq** (arna-mik)
 man.ABS kiss-AP-IND.**3SS** (woman-INST)
 ‘The man is kissing a woman/someone.’

The same pattern is attested in Kaqchikel. Comparing a canonical transitive (36a) to its AP counterpart (36b), we see again that object agreement, present in the transitive, is obviated in the AP.

(36) *Kaqchikel transitive/AP agreement alternations* (McKenna Brown et al. 2006)

- a. X-at-in-tz’ët
 CM-**2S.ABS**-1S.ERG-see
 ‘I saw you.’

⁸ Warlpiri (Hale 1973), Djaru (Tsunoda 1981), and Goonyandi (Tsunoda 1988) preserve ergative marking in the AP, as in (i).

(i) *AP subjects in Warlpiri retain ergative case* (Hale 1973)

- a. Njuntulu-**lu** npa-tju pantu-nu ŋatju
 2S-**ERG** 2SS-1SO spear-PST 1S.ABS
 ‘You speared me.’
- b. Njuntulu-**lu** npa-tju-la pantu-nu ŋatju-ku
 2S-**ERG** 2SS-1SO-AP spear-PST 1S-DAT
 ‘You speared at me.’

These facts would appear problematic for an analysis in which the realization of ergative is dependent on another KP. If the AP object in (ib) is a structurally reduced DP – it could not be an NP, because it is a pronoun – we would expect ergative case to be absent much as it is in the Chukchi examples above. One possible alternative is to argue that the structure in (ib) is in fact an instance of DOM, which does not entail detransitivization (e.g. Campana 1992, Malchukov 2006). On this view, the direct object in both instances is a full KP. The change in case morphology is then triggered by other factors about the intended meaning. Alternatively, we could treat Warlpiri and other languages which retain ergative case in the AP as instances of lexical/oblique ergative case (e.g. Woolford 1997, Aldridge 2004, Legate 2008). Ergative case in these languages would not require the presence of an absolutive-marked nominal.

- b. Y-i-tz'et-on (aw-ichin)
 INC-1S.ABS-see-AP (2S-OBL)
 'I see (you).'

Such concomitant changes in case and agreement alignment are expected. On the common view that case assignment and ϕ -agreement are both reflexes of AGREE (e.g. Chomsky 2000, 2001 and related earlier proposals), the connection is straightforward. If the direct object cannot serve as a goal for the establishment of an Agree relationship neither case nor ϕ -agreement should be realized. Similarly the correlation between case and agreement can be captured if case assignment is a prerequisite for ϕ -agreement (e.g. Bobaljik 2008; Preminger 2011, 2014). The case specification a nominal bears determines whether, in a given language or construction, it can serve as a target for a given ϕ -probe. On this view, a nominal that lacks case entirely, because it is smaller than KP, should never be able to control ϕ -agreement. Only the subject will be able to control agreement, yielding intransitive agreement patterns.

The basic detransitivizing pattern of AP constructions are captured under a variety of approaches to analyzing the construction. I compare the analysis presented here to two other families of syntactic analyses⁹: (i) nominal analyses (e.g. Marantz 1984, Baker 1988, Bittner 1994, Bittner & Hale 1996a,b) (ii) verbal analyses (e.g. Alexiadou 1999; Borer 2005; Schmidt 2003; Spreng 2006, 2012). Nominal analyses hold that a nominal element is base-generated inside the VP which undergoes head movement and absorbs object Case. Since the VP-internal argument position is saturated, the verb cannot assign case to its object or display object agreement. Case assignment to the external argument proceeds according to language specific requirements. Treatment of the AP object varies under these accounts. The AP object may either be complement to the incorporated AP morpheme (e.g. Bittner 1994; Bittner & Hale 1996a,b) or it may be a co-referential adjunct (e.g. Baker 1988; see also Baker et al. 1989 for a related analysis of the passive morpheme and *by*-phrase). On verbal analyses, the AP constitutes a form of aspectual marker located at v^0 (e.g. Schmidt 2003; Spreng 2006, 2012) or slightly above (e.g. Alexiadou 1999, Borer 2005). Details of interpretation differ, but most analyses of this type hold that this abstract AP functional head carries the aspectual specification of [-telic] or [+imperfective], capturing the interpretive consequences of the construction. This aspectual marker combines with the verbal root, and the functional head v^0 , altering the licensing of the object and concomitant object agreement.

With respect to the case and agreement facts, it would appear that the present analysis is on equal footing with previous accounts. Case and agreement change because the AP object is not a full KP and lacks [*uCase*]. As a consequence, it cannot participate in case-assignment or ϕ -agreement. Where these analyses differ sharply from the present analysis is in the nature of the AP morpheme. In nominal analyses, the AP morpheme is an incorporated element generated as (part of) the direct object. The AP morpheme then undergoes head movement into the verbal complex. On verbal analyses, it is a base-generated aspectual element which interferes with standard case and agreement relationships between the verbal complex and

⁹ I will not address lexicalist approaches to the AP here. See Polinsky (2015) for an overview.

the direct object. Neither of these approaches is available on the current analysis, which holds that AP constructions arise directly from the merger of a structurally reduced (i.e. NP or DP) object.

I suggest then that the AP morpheme can be viewed, on this account, as the realization of *failed object agreement*. The presence of special AP morphology is a reflex of the same mechanism which conditions the absence of object agreement on the verb. Without the ability to target the AP object for ϕ -agreement, $[u\phi]$ on v^0 will remain unvalued through the course of the derivation. This will not result in a crash. The interfaces can tolerate $[uF]$. See Chapter 2 for arguments to this end. It is possible for $[uF]$ to receive overt realizations, and I contend that AP morphology is one instance of an overtly realized $[uF]$.

This analysis places the current proposal generally in line with verbal analyses. The AP morpheme is verbal in nature; it is the Spell Out of v^0 . However, it is realized not because of a special instance of v^0 was merged, but because the canonical transitive v^0 was unable to target an appropriate KP goal for ϕ -agreement. As a verbal analysis, the current proposal avoids difficulties that have previously been raised for nominal analyses. The strongest arguments against a nominal analysis of AP morphology comes from the Inuit languages (e.g. Schmidt 2003; Spreng 2006, 2012). For instance, noun incorporation in Inuktitut is restricted to a certain class of affixal verbs. These verbs need to incorporate obligatorily for morphological and semantic reasons (cf. Johns 2003). The verbs that are claimed to incorporate the AP morpheme do not belong to this class. Another problem with the incorporation analysis of AP constructions lies in the fact that the incorporated noun (i.e. the AP morpheme) attaches to the right of the verbal root. With incorporating verbs, the incorporated noun attaches to the left of the verb. Both of these differences can be observed in the semantically equivalent sentences in (37).

(37) *Differences in NI and AP constructions* (Bittner 1994)

- a. Juuna ataatsi-nik **qamuti-qar-puq**
J.ABS one-PL.OBL **sled-have**-IND.3SS
'Juuna owns one sled.'
- b. Juuna qamuti-nik ataatsi-nik *pigi-**nnip**-puq*
J.ABS sled-PL.OBL one-PL.OBL *own-AP*-IND.3SS
'Juuna owns one sled.'

Comparing the NI and AP constructions, we can see that the form of the verb is different in each. Furthermore, the position with respect to the verb of incorporated noun in (37a) and the AP morpheme in (37b) is different. These facts are unexpected if both constructions involve the same application of Noun Incorporation. Although word order is relatively free in Inuktitut, morpheme order is not (Fortescue 1983).

On the other hand, the AP morpheme *-si-* behaves like a verbal element in many respects (Spreng 2006, 2012). Verbal inflection that does not change syntactic categories can be attached to it directly. It can also directly precede an aspectual marker (Spreng 2006).

(38) *Inuit AP morphemes are verbal* (Spreng 2006)

Anguti kunik-si-lir-puq arna-mik
man.ABS kiss-AP-ICPT-IND.3SS woman-OBL
'The man starts to kiss a woman.'

Since it is not plausible to assume that the aspectual marker is a verbalizing element that attaches to a noun, I follow Spreng (2006, 2012) in claiming that the AP morpheme must be verbal. Adopting the verbal analysis may provide some understanding of why the AP morpheme is syncretic with aspectual morphology. It is the realization of a verbal head.

One downside to adopting a verbal analysis of the AP morpheme is accounting for why AP morphology should be syncretic with detransitivizing morphemes in many languages. AP morphology (39a) syncretic with reflexive morphology (39b) and anticausative morphology (39c) is instantiated by Warrungu (39).

(39) *Syncretic AP and detransitivizing morphology* (Tsunoda 1988).

- a. Kaya kipa-**kali**
father.ABS shave-**AP**
'Father shaved someone.'
- b. Kaya-kipa-**kali**
father.ABS shave-**REFL**
'Father shaved himself.'
- c. Yuri watyu-**kali-n**
kangaroo.ABS cook-**ANTIC-??**
'The kangaroo is cooked.'

Similar patterns of syncretism are also found in Spanish and Lithuanian (Basilico 2004). The nominal analysis is appealing for APs whose marker is syncretic with reflexive, middle, or inchoative/anticausative morphology, as all of these morphemes could be understood to saturate the internal argument position of a two-place predicate (Basilico 2004). If the AP morpheme is an aspect or telicity marker, the connection is not immediately clear. However, the connection can be maintained on the present analysis. As AP morphology is failed agreement, it is plausible that different languages make use of different Vocabulary Items to serve as default morphology. In languages which utilize morphology syncretic with detransitivizing constructions, the syncretic morphology shares the property of signalling saturation of the internal argument position of a two-place predicate by a 'defective' internal argument. The internal argument is in some way unlike canonical internal arguments. For AP objects, the defectivity is located in their structural reduction. The key premise of the present analysis is that AP objects, just like PNI objects, are structurally reduced, unable to receive case or control agreement. Objects of reflexive, middle, and anticausative/inchoative clauses are 'defective' for other reasons.

Consider first reflexive constructions. Reflexive objects alter object agreement alignments (e.g. Woolford 1999). This is an instantiation of the anaphor agreement effect (Rizzi 1990). In Swahili, objects agree

in person, number, and noun class. (Though inanimate NP objects do not usually agree in Swahili, unless they are focused.) Pronominal objects can be overt if they are contrastively stressed, but they are normally null. Nevertheless, null objects trigger agreement just as overt objects do (40). Similarly, reflexive pronouns can also be overt when emphasized, but they are normally null. However, reflexive objects cannot trigger canonical object agreement morphology that appears in (40a). Instead, this special reflexive object agreement morpheme, *ji-*, must appear (40b).

(40) *Swahili anaphors trigger special object agreement* (Woolford 1999)

- a. Juma a-li-**m**-busu (yeye)
 J. 3SS-PST-**3SO**-kiss (her)
 ‘Juma kissed her.’
- b. Ahmed a-na-**ji**-penda (mwenyewe)
 A. 3SS-PRS-**REFL**-love (himself)
 ‘Ahmed loves himself.’

Whatever the correct understanding of the Anaphor Agreement Effect is to be, we might understand the syncretism of AP and reflexive markers as arising because, in some sense AP constructions and reflexive constructions involve internal arguments that are inappropriate targets for (canonical) agreement. The inappropriateness of reflexive objects for ϕ -agreement may lie in the hypothesis that these elements lack ϕ -features (e.g. Reuland 2011, Rooryck & Vanden Wyngaerd 2011). Also see Rizzi (1990) and Woolford (1999) for other suggestions for accounting for the anaphor agreement effect. This position allows for the two types of arguments to collapse in some environments, but certainly does not require that all languages treat AP and reflexive constructions the same. A target lacking ϕ -features may be treated differently by a ϕ -probe than a target lacking Case.

This is a welcome result as some languages with AP constructions do not use this morphology when cross-referencing object anaphors. This is the state of affairs in Inuit languages. As we have seen above, in the normal pattern of transitive clauses shown in (41a), both the subject and the object agree. When the object is an anaphor, this pattern with portmanteau subject-object agreement is ungrammatical, as in (41b) (Bok-Bennema 1991).

(41) *Inuit Anaphor Agreement Effect* (Woolford 1999).

- a. Angut-ip arnaq taku-vaa
 man-ERG woman.ABS see-IND.3SS/3SO
 ‘The man sees the woman.’
- b. *Hansi-up immi asap-puq
 H.-ERG himself.ABS wash-IND.3SS/3SO
 ‘Hansi washed himself.’

Inuit avoids violating the anaphor agreement effect by realizing constructions with reflexive objects as intransitive constructions, either with no (surface) object at all, as in (42a), or with the object in oblique Case,

not triggering object agreement, as in (42b). The agreement morphology that surfaces in (42) reflects only subject agreement, as in intransitive clauses.

(42) *Inuit reflexives must not control agreement* (Woolford 1999)

- a. Asap-puq
wash-IND.3SS
'He washed himself.'
- b. Angut immi-nut taku-vuq
man himself-DAT see-IND.3SS
'The man sees himself.'

No AP morphology surfaces in (42), illustrating that AP constructions are not always syncretic with reflexive constructions. In sentences like (42a), in fact, the presence of AP morphology would change the meaning of the sentence. It would no longer hold a reflexive meaning, but rather indicate that the subject washed someone.¹⁰ Nevertheless, in languages in which the two display identical morphology, we might understand this morphology to indicate that the object is unable to control (canonical) agreement. Under this view, the connection between AP and reflexive morphology can be maintained even when a verbal analysis of the AP morpheme is adopted. Both are default.

Similarly, the internal arguments of anticausative/inchoative and middle constructions also involve non-canonical internal arguments, because these internal arguments vacate the VP. Such constructions are unaccusative.¹¹ If we permit A-movement out of the vP to occur before the relevant step of ϕ -probing, we can capture the defectivity of middle and inchoative/anticausative internal arguments as targets for ϕ -probing by v^0 . Such limited countercyclicity has received independent support in other work (Holmberg & Hróarsdóttir, Sigurðsson & Holmberg 2008, Asarina 2011, Halpert 2012). An advantage of this position is that it then explains why many languages, particularly Hebrew and the Romance *se-si* constructions, have identical verbal morphology for reflexives, middles, and anticausative/inchoatives even though the reflexives have been argued to be unergative (e.g. Grimshaw 1982, Wehrli 1986, Chierchia 1989, Reinhart 1996, Reinhart & Siloni 2005, Sportiche 2014), while middles and anticausative/inchoatives have been argued to be unaccusative.¹² Examples of the three uses of French *se* are provided in (43).

¹⁰ I thank Richard Compton (p.c.) for making this point.

¹¹ Though see Schäfer (2008) and Alexiadou (2014) for some discussion of cross-linguistic variation in middle constructions. These authors make the point that that some languages employ unergative middles.

¹² The unergative status of reflexive constructions is not uncontroversial. For instance, Bouchard (1984), Marantz (1984), Kayne (1989), Grimshaw (1990), Sportiche (1990), Pesetsky (1995), and Rooryck & Vanden Wyngaerd (2011) all hold that French reflexive *se* constructions are unaccusative. Sportiche (2014) provides an overview of the debate and a new argument in favor of the unergative analysis.

(43) *French ‘se’ marks reflexives, middles, and anticausatives* (Sportiche 2014)

- a. Jean **se** croit idiot
J. SE believes stupid
‘Jean believes himself stupid.’
- b. Ces livres **se** sont vendus
these books.M.PL SE are sold.M.PL
‘These books sold.’
- c. La palissade s’est renversée
the fence.F.SG SE.is tipped.over.F.SG
‘The fence tipped over.’

In each case, in (43), the presence of *se* can be understood as indicating the presence of a ‘defective’ internal argument. In the reflexive construction it is the unrealized reflexive internal argument. In the middle and anticausative construction, *se* indicates that the internal argument has vacated the *vP*.

The current proposal for the AP construction then lends itself better to capturing the varying forms of AP morphology utilized cross-linguistically. AP morphology is the spell out of a transitive v^0 which retains $[u\phi]$. Crucially, it is not a special verbal/aspectual head, as the verbal analyses propose. Neither is it a nominal head incorporated into the verb, which the nominal analyses propose. This affords the AP morphology variability in its realization cross-linguistically which, as we have seen, is attested. This variability arises, because languages employ distinct Vocabulary Insertion rules for the spell out of v^0 which retains $[u\phi]$ at the interfaces. The connection to either a verbal realization or a detransitivizing realization is captured, because the AP construction is both. The AP morpheme itself is verbal, but the construction is detransitivizing.

If the analysis presented here is correct however, we might wonder why ‘default’ object agreement is not realized. It is common cross-linguistically for default agreement to be realized as 3rd person, singular. For instance, in Hindi-Urdu ϕ -agreement is controlled by the structurally highest unmarked argument (44).

(44) *Agreement in Hindi-Urdu always targets unmarked nominals* (Bhatt 2005)

- a. Niina bacce-ko uthaayegii
N. \emptyset (F) child-KP lift.FUT.F
‘Nina will pick the child up.’
- b. Raam-ne RoTii khaayii thii
R.-ERG. (M) bread- \emptyset (F) eat.PRF.F be.PST.F
‘Ram had eaten bread.’
- c. Siitaa-ne laRkii-ko dekhaa
S.-ERG (F) girl-KO (F) see.PRF.M
‘Sita saw the girl.’

In (44a), the feminine subject is unmarked, controlling feminine agreement on the verb. In (44b), the subject is overtly marked with ergative case. It is now the unmarked object that controls feminine gender agreement on the verb. In (44c), both arguments are feminine, however as both are overtly marked neither controls

agreement default, masculine agreement is realized.

In fact, Preminger (2009) argues that the realization of default morphology in languages in which it is overt can be used to indicate failed agreement. Unfortunately, I know of no language that unambiguously yields default object agreement in AP constructions. It remains a challenge to understand, if the proposed analysis is correct, why failed agreement results in the realization of syncretic morphology in place of default ϕ -agreement. One possibility would be to locate failed agreement in a different functional head than that which controls ϕ -agreement (cf. Halpert 2012).

Despite open questions regarding special AP/PNI morphology, we can see that merger of a smaller-than-KP is to capture the chief syntactic characteristics of these constructions compared to their transitive counterparts.

5.3.2 Semantic consequences of NP/DP merger

Structurally reduced nominals not only have consequences for the syntax of the derivation, but the semantics as well. I now demonstrate that the current proposal explains the semantic alternations attested in AP (and PNI) constructions compared to canonical transitives. Specifically, merger of a structurally reduced nominal captures why AP objects are (often) non-specific indefinites, and why events described in AP clauses have atelic interpretations. Non-specific indefinite interpretations arise, because structurally reduced NP arguments must be interpreted distinctly from full KPs. Atelic interpretations arise, because both structurally reduced NP and DP arguments cannot serve as appropriate arguments to measure out the event.

Recall first that AP constructions (like PNI) display cross-linguistic variability with respect to the interpretation of the AP object. In some cases, the AP must be interpreted as indefinite. However, in other languages, this is not the case. Note the change in interpretation from the absolutive-marked object in (45a) to the oblique-marked object in (45b).

(45) *Mittimatalik transitive/AP agreement alternations* (Spreng 2012)

- a. Anguti-up arnaq kunik-**taa**
man-ERG woman.ABS kiss-PRT.**3SS/3SO**
'The man kissed the woman.'

Anguti kunik-si-**vuq** (arna-mik)
man.ABS kiss-AP-IND.**3SS** (woman-INST)
'The man is kissing a woman/someone.'

The absolutive object is translated as definite, while the oblique object is translated as indefinite. When the AP object is null, the object is understood as generic. As noted in Chapter 3, this interpretive asymmetry between oblique and absolutive objects is mirrored in PNI. Case-marked objects are often interpreted as definite, while Caseless objects are often interpreted as indefinite. Just as in PNI, AP objects that are understood as indefinite also must take narrow scope. Absolutive objects in transitive clauses like (46a) take wide scope over necessity modals, while oblique AP objects like (46b) scope under these elements (e.g. Bittner

1987, 1994; Benua 1995; Basilico 2003).¹³

(46) *Scope alternations in West Greenlandic* (Bittner 1994)

- a. Atuartu-t ila-at ikiur-tariaqar-para
student-P.ERG part-3P.S help-must-IND.1SS/3SO
'There is one of the students that I must help.'
- b. Atuartu-t ila-an-nik ikiu-i-sariaqar-punga
student-P.ERG part-3P.S-INS help-AP-must-IND.1SS
'I must help one of the students (any one will do).'

Concomitant indefinite interpretation and narrow scope requirements for AP and PNI objects signal that they may be structurally reduced NPs.

It is not the case, however, that AP objects are necessarily interpreted as indefinite. Recall that AP objects in Mayan can be pronominal as the data from Kaqchikel (47) illustrates.

(47) *Kaqchikel AP objects can be definite* (McKenna Brown et al. 2006)

- a. X-at-in-tz'ët
CM-2S.ABS-1S.ERG-see
'I saw you.'
- b. Y-i-tz'et-on (aw-ichin)
INC-1S.ABS-see-AP (2S-OBL)
'I see (you).'

Furthermore, just as definiteness restrictions on the AP objects vary so do scope alternations. In Adyghe (Northwest Caucasian), both transitive and AP clauses with an oblique object are ambiguous between surface and inverse scope (Polinsky 2015).

(48) *Adyghe APs permit scope variability* (Polinsky 2015)

- a. Pšaše-m zeč'e-r-jə pjəsmə(-xe)-r 0-ə-txə-Ɂ
girl-ERG all-ABS-ADD letter(-PL)-ABS 3.ABS-3S.ERG-write-PST
'A/The girl wrote all the letters.' [∃ > ∀; ∀ > ∃]
- b. Pšaše-r zeč'e-m-jə pjəsmə(-xe)-m 0-txa-Ɂ
girl-ABS all-ADD-OBL letter(-PL)-OBL 3.ABS-write.AP-PST
'A/The girl wrote all the letters.' [∃ > ∀; ∀ > ∃]

This variability in interpretation is expected if both NPs and DPs are structurally reduced, and K^0 is semantically vacuous. In the absence of K^0 , both will alter case and agreement alignments, but DP arguments

¹³ Polinsky (2015) objects to the Greenlandic scope data. She suggests that it is possible that the absence of scope variability arises due to some interaction between quantification and modality (cf. Hacquard 2006), between quantification and negation, or between quantification and aspect. If she is correct, the differences in Greenlandic scope readings would be orthogonal to the transitive/AP contrast. More research is necessary. However, for current purposes, I continue to treat the data as a consequence of the transitive/AP alternation.

contribute a distinct semantics from NP arguments. NPs are interpreted as predicates – type $\langle e,t \rangle$. DPs can be interpreted as entities or generalized quantifiers. DPs and KPs are then semantically identical. Both are of type $\langle e \rangle$ or $\langle et,t \rangle$, able to be interpreted as definite or as generalized quantifiers, and take wide scope.

Differences in interpretation between transitive and AP objects arise if the AP object is smaller than DP, i.e. if it is an NP. NP arguments are property-denoting predicates. They are of type $\langle e,t \rangle$ (e.g. Van Geenhoven 1998, Chung & Ladusaw 2004, Farkas & de Swart 2004, Dayal 2011). NP objects then pose a combinatorial problem for semantic interpretation. They are not of the right semantic type to combine with the transitive verb – type $\langle e,et \rangle$. The verb, a two-place predicate, must combine with two entities to be saturated. As such, two general approaches have been taken to account for this type-mismatch: (i) the semantic denotation of the verb can be altered to successfully compose with the NP-argument (e.g. Van Geenhoven 1998, Farkas & de Swart 2003, Dayal 2011), (ii) a compositional operation other than functional application can be utilized to combine the verb and NP argument (e.g. Chung & Ladusaw 2004, Marti 2010). I have nothing to say in favor of one type of account over the other. Below, I introduce both, and discuss how the NP-status of the AP object affects its interpretation.

One specific account of the semantics of NPs and how they compose with the verb is due to Van Geenhoven (1998). Putting some details aside, her approach is quite similar to that of Farkas & de Swart (2003) and Dayal (2011). As such, I use this approach to represent all accounts which manipulate the denotation of the verb to successfully compose with an NP-complement. I direct the reader to the individual works for details of each. Van Geenhoven proposes that verbs come in two forms: one in which they take an entity as their first argument (49a), and one in which they take a property as their first argument (49b).

(49) *Verbs can take entity or property internal arguments*

- a. $\lambda y_e \lambda x_e [\text{Verb}(x,y)]$
- b. $\lambda P_{\langle e,t \rangle} \lambda y_e \exists y [\text{Verb}(x,y) \wedge P(y)]$

One important aspect of (49b) is that the existential interpretation of the NP-argument is contributed by the verb, capturing immediately the requirement that such elements be interpreted as narrow scope indefinites. Van Geenhoven suggests the two be linked by a lexical redundancy rule (following Dowty 1981), ensuring that the correct verbal denotation is employed based on the form and interpretation of the internal argument.

One of the chief problems faced by any account of NP-argument composition that relies on a change in verbal denotation, is that such an account is committed to the notion that NP-arguments can saturate a predicate. Chung & Ladusaw observe that in Chamorro, NP arguments can be doubled.

(50) *Argument doubling in Chamorro* (Chung & Ladusaw 2004)

Hämi gäi-[ga'] ennaor na ga'lagu
 we WH[NOM].AGR.have-pet that LNK dog
 'We own that dog.'

Chung & Ladusaw (2004) argue extensively that the incorporated argument *-ga* ‘pet’ is an NP. It has a non-specific indefinite interpretation and takes narrowest scope. If the NP composes with a verb that takes a property as its first argument, the presence of the phrase *ennaō na ga’lagu* ‘that dog’ is surprising. This element is understood as the thematic object. However, Chung & Ladusaw show that this element is not an argument at all, but an adjunct. The question then is how can both the incorporated nominal and the adjunct both combine with the verb to yield the attested meaning. Chung & Ladusaw propose a novel operation, RESTRICT (51), which allows an NP-argument to compose with the verb, but not to saturate one of its argument positions.

(51) **Restrict** (Chung & Ladusaw 2004)

$$\text{Restrict}((\lambda y_e \lambda x_e [\text{Verb}(x,y)])(\lambda z_e P(z))) \Leftrightarrow \lambda y_e \lambda x_e [\text{Verb}(x,y) \wedge P(x)]$$

The result of RESTRICT is quite similar to the denotation of the verb when it takes an NP-argument on Van Geenhoven’s and related accounts. However, RESTRICT only serves to reduce the plausible entities that can serve as the internal argument of the verb. It does not saturate the predicate. As such, the verb can compose with another element to further specify the internal argument as in (50).¹⁴ When no additional argument is introduced, the Restricted internal argument can be saturated by existential closure. Existential closure occurs below the position where other scope bearing elements are interpreted (Heim 1982, Diesing 1992), ensuring narrowest scope for NP-internal arguments. Interpretation of the AP object can then be captured by nominal size alone. Reduced AP objects that are NPs are interpreted as narrowest scope indefinites. Reduced AP objects that are DPs are able to be definite and take wide scope.

The second significant semantic consequence of AP constructions is the interpretation of the event they express. Cross-linguistically, AP constructions receive an atelic interpretation when compared to their transitive counterparts. Crucially, the atelicity of the event described in the AP clause arises even when the AP object can be interpreted as definite. Consider the Chukchi AP, as in (52).

(52) **Chukchi transitive/antipassive alternation** (Kozinsky et al. 1988)

- a. ʔaaček-a kimitiʔ-ən ne-nlʔetete-ən
youth-ERG load-ABS 3PS-carry-AOR.3SO
‘The young men carried away the/a load.’
- b. ʔaaček-ət **ine**-nlʔetet-gʔe-t **kimitiʔ-e**
youth-ABS AP-carry-AOR.3S-PL **load-INST**
‘The young men carried away the/a load.’

As the translations indicate, the AP object can be interpreted as definite, just like the transitive object. Nevertheless, Chukchi APs display atelicity when compared to their transitive counterparts, as in (53)

¹⁴ The ability to compose with a second argument is shared by all languages. Chung & Ladusaw posit that syntactic conditions on well-formed adjuncts necessary to introduce these arguments is what limits their cross-linguistic realization.

(53) *Chukchi transitive/AP alternations affect telicity* (Palmer 1994)

- a. ətleg-e keyng-en penre-nen
father-ERG bear-ABS attack-AOR.3SS/3SO
'Father attacked the bear.'
- b. ətleg-en penre-tko-g'e kayng-ete
father-ABS attack-AP-AOR.3SS bear-DAT
'Father ran at the bear.'

This pattern suggests that atelic interpretations cannot arise due to the interpretation of the AP object alone.¹⁵ Both NP and DP AP objects trigger atelic interpretations. Instead, I suggest that it is the non-KP status of the AP (and PNI) object that contributes to change in telicity. Both DPs and NPs are non-KPs – neither can receive canonical object Case – capturing why they both affect telicity, but not object interpretation.

A number of researchers have observed that alternations in object case morphology have an effect on event interpretation (e.g. Tenny 1987, 1994; Van Voorst 1988; Runner 1993; Borer 1994, 2005; de Hoop 1996; Ramchand 1997; Kiparsky 1998, 2001; Ritter & Rosen 2000; Travis 2000, 2010; Svenonius 2002a,b; Kratzer 2004a,b; Aldridge 2012; Spreng 2012). The connection between object movement and structural case-assignment is extended to event interpretation, in an attempt to account for the relationship between telicity and the availability of structural case for the object. Finnish is usually the exemplifying language, in such discussions of the relationship between case morphology and event interpretation, in (54a), where the object appears with partitive case, the meaning is imperfective/atelic. With accusative case on the object, as in (54b), the meaning is perfective/telic.

(54) *Finnish object case alternations affect event interpretation* (Arad 1998)

- a. Anne rakensi talo-**a**
A. built house-PART
'Anne was building a/the house.'
- b. Anne rakensi talo-**n**
A. built house-ACC
'Anne built a/the house.'

Note that event interpretation cross-cuts the specificity/definiteness of the object. In both cases, the object can receive either a definite or indefinite interpretation. This is similar to the observation from AP constructions made above. Case alternations, not object interpretation, affect AP event interpretations.

Furthermore, the syntactic position of an object also seems to depend on event interpretation. The

¹⁵ To be sure, the form of the direct object can affect interpretative possibilities. English bare plural objects are incompatible with adverbials that express completed events, (i).

(i) *Bare plurals require incomplete interpretations*

- a. John walked *the dogs* for/in 5 minutes.
b. John walked *dogs* for/*in 5 minutes.

clearest case is that of Scots Gaelic where, as Ramchand (1997) shows, depending on the verb's aspect, the object appears either after the verb (55a) or before it (55b).

(55) *Scots Gaelic object position alternations affect event interpretation* (Ramchand 1997)

- a. Bha Calum a'faicinn **a'bhalach**
 be-PST C. AG see-VN **boy.GEN**
 'Calum saw the boy.'
- b. Bha Calum air **am balach** (a) fhaicinn
 be-PST C. AIR **the boy.DIR** (A) see-VN
 'Calum had seen the boy.'

Crucially, it is the perfective form that takes the preverbal object, while the imperfective has the postverbal object. The correlation of perfective event interpretation with accusative case or moved objects is pervasive in a wide range of genetically unrelated languages. Finnish and Scots Gaelic demonstrate that perfectivity and the syntactic realization of an object, i.e. case and/or position, correlate. However, a number of researchers have demonstrated that syntactic realization of the object is more closely related to telicity than to perfectivity and that the link between perfectivity and object realization is always mediated by telicity (e.g. Kratzer 2004, Travis 2010, Spreng 2012).

Kratzer (2004) suggests that the relationship between object case and telicity can be captured by conditioning telic interpretations on successful assignment of canonical object case. Specifically, she suggests that predicates that can receive either telic or atelic interpretations do not specify telicity in their semantic denotation. The culmination (i.e. telicity) of an event is, instead, provided by a distinct functional head's denotation. Achievement predicates like *shoot* (56a) and *climb* (56b) are not inherently telic. Instead, they are assigned the denotations below. Telicity is achieved when such predicates combine with a functional head that provides the meaning of event culmination (56c).

(56) *Telic interpretations are achieved in two steps* (Kratzer 2004)

- a. *Shoot* – $\lambda x \lambda e$ [shoot-at(x)(e)]
- b. *Climb* – $\lambda x \lambda e$ [climb-up(x)(e)]
- c. [telic] – $\lambda R \lambda x \lambda e$ [R(x)(e) \wedge $\exists f$ [measure(f) \wedge $\forall x'$ [$x' \leq f(x) \rightarrow \exists e'$ [$e' \leq e \wedge R(x')(e')$]]]]

Transitive verbs express relations between individuals and events. In the case of *climb*, the relation holds between an individual x and an event e just in case e is an event of climbing up x . Kratzer (2004) proposes that the feature [telic] turns originally atelic stems like *climb* or *shoot* into telic ones. For this approach to succeed, we must adopt the assumption that there is some mechanism that determines a range of functions that map the referents of certain direct objects into what Kratzer calls "concrete or abstract measuring rods" associated with those referents. These measuring rods permit the evaluation of culmination. In the case of a verb like *climb*, the measuring rod is the direct object itself – e.g. a mountain. Climbing up a mountain culminates, if every (relevant) part of that mountain has been climbed up. Crucially, the top is a relevant

part. However, Kratzer is correct in observing that in shooting at a bear, it's not the bear itself, but possible paths that a bullet can take leading from the gun to the bear that are the measuring rods. You shoot the bear only if you shoot at all parts of some path leading to it.

For Kratzer (2004), the connection between telicity and object case is captured by collapsing the functional head that assigns canonical object case with the functional head that assigns a telic interpretation. Little v^0 is responsible for both. Travis (2010) makes similar assumptions about the relationship between object case and telicity, but holds that the Inner Aspect head is the locus of both. When canonical object case is checked by the correct form of v^0 (or Inner Aspect), the direct object will bear the canonical object case and the event will receive a telic interpretation. As Kratzer (2004) notes, semantic interpretability of the denotations above further require movement of the direct object. Such movement may be covert, but it may also be overt, as is the case in Scots Gaelic. The connection between telicity and perfectivity can be modeled indirectly, through c-selection (e.g. Travis 2010). If perfectivity is conditioned by an independent (Outer) Aspect head, certain aspectual values may require combining with certain telicity values.

Returning to the AP construction, I loosely follow Kratzer's proposal, positing that just as the form of object case affects telicity and perfectivity in Finnish, Scots Gaelic, and other languages, the complete absence of object case, in AP and PNI constructions, also affects telicity and perfectivity. However, a slight emendation to Kratzer's proposal is in order. Kratzer relies on case checking to ensure the relationship between canonical object case and telicity. The direct object enters the derivation with a case specification which must be checked by the correct instance of v^0 . The flavor of v^0 that provides accusative case-checking simultaneously provides a telic interpretation. The flavor of v^0 that does not provide accusative case-checking, simultaneously does not provide a telic interpretation. Furthermore, establishment of a case-checking relation between the direct object and v^0 must be followed by movement of the direct object. If it were interpreted in its base-position, the VP would denote a mere property of events rather than the required relation between individuals and events. Semantic interpretation fails due to a type mismatch.

On the current proposal, the connection between telicity and Case can be explained as a failure to value the telicity feature. If a successful instance of AGREE is needed for the telic interpretation to be achieved, we might imagine that this relationship is conditioned by [Case], much like ϕ -agreement (Bobaljik 2008; Preminger 2011, 2014). Failure to find an appropriately case-marked argument, i.e. one bearing [u Case] at the time of probing, would result in an unsuccessful instance of AGREE possibly rendering the unvalued telicity feature uninterpretable. This proposal has novel ramifications for our understanding of how unvalued features interact with the interfaces. As noted in Chapter 2, [u F] can survive the derivation. Preminger's (2011, 2014) exploration of these facts focused on [$u\phi$]. Verbal [ϕ]-features do not (appear to) condition semantic interpretation. Similarly, the specific (structural) [Case] of a nominal does not appear to (directly) affect semantic interpretation.¹⁶ I posited, in Chapter 2, that [(u)Case] is semantically vacuous. As such, it is unclear what if any affect [$u\phi$] and [u Case] (directly) have on semantic interpretation. However, [telic]-features clearly have semantic import. The current proposal suggests that this import cannot be realized

¹⁶ Semantic import of adverbial cases may be provided by P⁰.

unless AGREE is successful. A semantically contentful feature may not trigger a crash if it remains unvalued through the derivation, but it will not be able to contribute to the interpretation. Further investigation into the relationship between failed [uF]-valuation and semantic interpretation is necessary to determine if this proposal is generally viable.

5.4 Conclusion

In this chapter, I argued for a second alternative licensing strategy – K^0 -insertion. I observed that PNI and AP constructions display a number of syntactic and semantic alternations when compared to their corresponding transitive counterparts. If common analyses of PNI, including the one adopted in this dissertation, are correct, all these alternations can be attributed to the merger of a structurally reduced object in place of a full KP. I suggested that the similarities between PNI and AP be captured by modeling AP constructions as merger of a structurally reduced nominal, as well. Nevertheless, in order to satisfy the proposed Case Filter, AP objects (like PNI objects) must be alternatively licensed. The two constructions can then be understood to vary in how they license their structurally reduced objects. As argued in Chapters 3 and 4, PNI objects are licensed under linear adjunction. Above, I suggested that it was K^0 -insertion that licenses AP objects accounting for their realization as oblique. The present analysis was also shown to have empirical and conceptual advantages over previous analyses of the AP.

The proposed analysis of the AP, that AP constructions arise when a structurally reduced object enters the derivation, captures all the attested syntactic and semantic alternations that AP constructions display when compared to their corresponding transitive clauses. The current analysis was motivated by the observation that PNI constructions, which have been commonly assumed to only differ from transitive clauses in the size of their internal argument (Massam 2001), display the same behaviors. The two constructions can then be unified to a significant degree. Both have the same syntax. Merger of a structurally reduced internal argument triggers changes in case and agreement as well as interpretation for the object and the event described by the clause. Compared to previous analyses of the AP constructions, the current account has a number of advantages. AP morphology is verbal (e.g. Benua 1995, Spreng 2006) not nominal (e.g. Baker 1988, Bittner 1994), capturing why the construction should differ from Noun Incorporation in (some) languages that employ both constructions. The account provides a direct mapping of the Theme θ -role to the internal argument (*contra* Baker 1988). No θ -sharing mechanism is needed to explain why the oblique argument is understood as the object, because the oblique object is merged in the same position as the canonical transitive object.¹⁷ The analysis permits variability in the realization of AP morphology. It is the spell out of v^0 that retains [$u\phi$] through the course of the derivation. This allows for a possibly wide variety of syncretism with other morphology that also signals the presence of a non-canonical internal argument cross-linguistically.

¹⁷ Adopting the RESRICT approach of Chung & Ladusaw (2004) is one means of capturing θ -sharing between an NP internal argument and an adjunct.

A final advantage is that the current analysis does not limit AP constructions to ergative languages (*contra* e.g. Bok-Bennema 1991, Bittner 1994, Spreng 2012). As noted above, nominative-accusative languages do employ AP constructions, though this pattern is more typologically rare. The present analysis says nothing about case/agreement alignment of the languages in which AP constructions are to be found. All that is needed to trigger an AP construction's realization is the merger of a structurally reduced smaller-than-KP object. This choice alone captures changes in case and agreement alignments in the AP, and accounts for why the AP object must be oblique or null. The analysis captures language and construction-specific variation as a consequence of nominal size alone, making use of an independently motivated alternation.

Where the PNI and AP constructions differ is in how the Caseless object is licensed. PNI objects are licensed under head-head adjacency with the verb. AP objects are licensed via K^0 -insertion. We can be sure that head-head adjacency is not relevant in the AP, because other constituents (57a) and nominal-internal elements (57b) can licitly disrupt adjacency between the AP object's head and verb.

(57) *AP objects do not require verb-adjacency*

- a. *Kalkatungu* (Blake 1990)

Nyini anyi-minhan-n **nga-tyi** maa-tyi?
 You gave-AP-2SS **I-DAT** food-DAT
 'Are you giving me any food?'
- b. *Kalaallisut* (Bittner 1994)

Suli Juuna atuakka-mik **ataatsi-mi** tigu-si-sima-nngi-laq
 Still J.ABS book-OBL **one-OBL** get-AP-PRF-NEG-3SS
 'Juuna hasn't received (even) one book.'

Adjacency with the verb is not required in AP, because the Caseless object is licensed by K^0 -insertion.

Having identified two possible licensing strategies for nominals that cannot possibly receive Case, one might wonder why a language employs the repair that it does. Why should Niuean require its NP objects to be realized adjacent to the verb, while Chukchi requires them to be realized within a PP? I have nothing to say on this point at the moment. I know of no correlation between the attested repair and other aspects of the languages that employ that repair. This and related questions about the parameterization of alternative licensing strategies must be left for future research.

Appendix: P^0 -insertion and Austronesian subjects

Before concluding this chapter, I return to Austronesian *in situ* subjects, suggesting that in some instances P^0 -insertion plays a role in conditioning their form. This position illustrates a certain symmetry between structurally reduced objects and *in situ* subjects. Both employ similar strategies for repairing illicit structures. Reduced objects violate the Case Filter and can be alternatively licensed via adjunction or K^0 -insertion. *In situ* subjects in Austronesian-type Voice languages violate Distinctness requirements. To repair

these violations they can be structurally reduced, in which case they require licensing via adjunction as well, or they can be structurally enriched via P⁰-insertion.

Recall from Chapters 2 and 3 that Austronesian-type Voice system languages display a case alternation between *in situ* subjects and Pivot subjects. In the case of Balinese and Malagasy, the alternation was one between a full KP and a reduced DP. I argued that the *in situ* subject became a DP during the course of the derivation as a consequence of the Subject In-situ Generalization. Specifically, I adopted Richards's (2010) Distinctness approach to the SSG, treating SSG effects as a subtype of a more general ban on the realization of identical categories in the same Spell Out domain. On this view, SSG effects arise when two KPs are generated within the vP, and can be ameliorated by altering the structure of one of the two. In the case of Balinese and Malagasy, the subject KP becomes a DP. The Distinctness analysis of head-head adjacency in *in situ* subjects is necessitated, because, unlike PNI objects which display a fair amount of cross-linguistic as well as language-internal idiosyncrasy, *in situ* subjects uniformly display head-head adjacency. Furthermore, PNI objects disrupt canonical case morphology patterns, while *in situ* subjects do not. A conceptual advantage of the Distinctness approach is that it allows us to further explain instances of case alternation on *in situ* subjects that do not require head-head adjacency. In these languages, the KP is encased in extra structure, remedying the Distinctness violation (cf. Erlewine, Levin, & Van Urk 2015).

Many Voice system languages display an overt case alternation on subjects. I repeat the relevant data here. In languages like Squliq Atayal (58), Tagalog (59), and Dinka (86) *in situ* subjects are marked differently than subjects that are promoted to Pivot.

(58) *Squliq Atayal SV/non-SV subject case alternation* (Liu 2004)

- a. M-aniq qulih qu' **Tali**.
SV-eat fish QU **Tali**
'Tali eats fish.'
- b. Niq-un **na**' **Tali**' qu' qulih qasa.
eat-OV CS **Tali** QU fish that
'Tali ate the fish.'

(59) *Tagalog SV/non-SV subject case alternation* (Rackowski & Richards 2005).

- a. B<um>ili **ang bata** ng tela sa palengke para sa nanay
buy<SV> **ANG child** CS cloth DAT market for DAT mother
'The child bought cloth at the market for mother.'
- b. B-in-ili-Ø **ng bata** ang tela sa palengke para sa nanay
-ASP-buy-OV CS **child** ANG cloth DAT market for DAT mother
'The child bought *the cloth* at the market for mother.'

(60) *Dinka SV/non-SV subject case alternation* (Van Urk 2015):

- a. Àyén à-càm cuṇ nẹ pàal.
Ayen 3S-eat.SV food P knife
'Ayen is eating the food with a knife.'

- b. Cuïn à-cέem **Áyèn** nẹ pàal.
 food 3S-eat.OV **Ayen.GEN** P knife
 ‘The food, Ayen is eating with a knife.’

However, these languages do not require *in situ* subjects to display head-head adjacency to the verb. In Squliq Atayal (61) and Tagalog (62), other arguments and adjuncts can intervene between the verb and the *in situ* subject.

(61) **Squliq Atayal non-Pivot subjects do not require verbal adjacency** (Michael Y. Erlewine, p.c.)

- a. Cyux biq-**an** *pila* na Tali qu Yumin
 AUX give-LV money GEN T. QU Y.
 ‘Tali gives Yumin money.’
- b. Wal=saku kt-**an** (*hera*) na Tali (*hera*)
 AUX.PST=1S.NOM see-OV (yesterday) GEN T. (yesterday)
 ‘Tali saw me yesterday.’

(62) **Tagalog non-Pivot subjects do not require verbal adjacency** (Kroeger 1993)

- a. ?Sinulat- \emptyset *ang liham* ni Juan
 ASP.write-OV ANG letter CS J.
 ‘Juan wrote the letter.’
- b. Binisita- \emptyset (*sa palasyo*) ni Juan *ang hari* (*sa palasyo*)
 ASP.visit-OV (DAT palace) CS J. ANG king (DAT palace)
 ‘Juan visited the king in the palace.’

The open question now concerns the nature of this case alternation.

As noted above, the subject case alternation in Austronesian Voice systems has been taken by many researchers to be a result of varying Case-licensing strategies (e.g. Guilfoyle et al. 1992, Aldridge 2004). These analyses contrast with those in which Case-licensing is uniform across voices (e.g. Pearson 2001, 2005; Rackowski 2002; Rackowski & Richards 2005). Guilfoyle et al. (1992) hold that case alternations correlate with promotion to Pivot, because the different Voice morphemes lexically Case-license different arguments. In Object Voice (OV), the subject is licensed in its base-position, and the object must be promoted to Pivot to be licensed. Similarly, in Subject Voice (SV) it is the object that is licensed in its base-position and the subject that must move. On an ergative analysis of case and Voice alternations (Aldridge 2004 *et seq.*), OV clauses are analyzed as simple transitive clauses, in which the object is marked with absolutive case and the subject with ergative case.¹⁸ In this analysis, SV marks a syntactically intransitive clause. As such, the intransitive subject is morphologically marked in the same way as the transitive object – with the absolutive marker. The Voice morphology glossed as OV and SV above are then markers of the clause’s syntactic transitivity, transitive and intransitive, respectively. This analysis can be extended to SV clauses with transitive roots by treating them as AP constructions. The AP alternation takes the transitive verb and

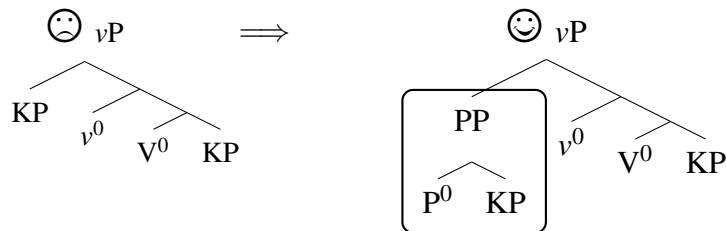
¹⁸ In Non-Subject Voices the subject is morphologically marked in the same way that nominal possessors are. This is treated as a syncretism between ergative and genitive case, a common pattern cross-linguistically (Trask 1979).

demotes the object, resulting in a syntactically intransitive verb with a single argument. The result is that the verb is now intransitive and bears intransitive (SV) morphology. The subject is again marked absolutive.

However, we have also seen arguments against this view. In Chapter 2, I argued in favor of a uniform approach to case assignment in Formosan languages as a means of explaining why default Voice morphology is identical to SV morphology. In both cases the verb's Case Agreement feature remains unvalued through the course of the derivation. In default contexts there is no argument to value it. In SV contexts, [*u*Case] on the subject remains unvalued, because the languages in question are nominative-accusative and nominative case is the realization of unmarked case. Furthermore, Erlewine, Levin, & Van Urk (2015) provide arguments that, in the Voice-system language Dinka, Voice and case morphology can be dissociated. In V1 environments, SV is realized without concomitant absolutive case-marking on the subject. The one-to-one mapping of Voice and case under views in which Voice determines case marking are untenable here. The case alternation cannot be seen as arising from the Voice alternation.

The case alternation can instead be captured by P⁰-insertion. Whenever two arguments are generated within the vP, a Distinctness violation will be created. P⁰-insertion ameliorates the Distinctness violation by adding additional structure to the subject KP. P⁰-insertion for *in situ* subjects is schematized in (63).

(63) *P⁰-insertion remedies Distinctness violations*



In (63), the completed vP contains a Distinctness violation of the form <KP,KP>. This Distinctness violation is repaired by the addition of structure, yielding a linearizable form <PP,KP>. As noted in Section 5.1, *of*-insertion can be understood in exactly these terms, as well. As with AP objects, realizing the subject KP within a PP will condition its form, yielding a case alternation.

The form of the *in situ* subject is conditioned by its realization within a PP, headed by a null P⁰. Support for this position comes from the observation that, in Dinka, the same case morphology is found in overt PPs headed by overt P⁰ (Andersen 1992):

(64) *Genitive case on Dinka prepositional complements* (Andersen 1992)

- a. Yín nhiàr yòn è Màyèn.
you love.SV house.LNK P Mayen.GEN
'You love Mayen's house.'
- b. Cuín a-cíi cà m ne pàl ne Áyèn.
food.ABS 3S-PRF.PASS eat.NF P knife.ABS P Ayen.GEN
'The food has been eaten with a knife by Ayen.'

In situ subject and prepositional complement syncretism lends strong support to the current proposal.

This Distinctness repair applies to the spelled out *vP* *regardless of whether or not both arguments are overt within it*. In Chapter 4, I suggested two reasons for why this could be. One possibility, following Pearson (2001, 2005), is that the Pivot argument does not move to Pivot position, but is base-generated there. It is co-referent with a null operator in argument position. In which case a transitive *vP* will always contain two arguments, yielding a Distinctness violation. This account was used to capture why Malagasy displays reconstruction effects, but no weak crossover. However, I suggested that this account was incompatible with Dinka *ke*-stranding in which plural arguments strand a pronoun at the edge of every phase they move through. It is not clear why a null operator dependency should mark the phases it spans, or why this dependency would be sensitive to plurality. Furthermore, the account faces problems in capturing licit and illicit sequences of promoted arguments in Balinese. If multiple arguments can be base-generated in \bar{A} -positions, it is not clear why some combinations should be well-formed and others should not. Alternatively, I suggested that Distinctness repairs operate on structures before copies have been deleted. Distinctness is blind to subsequent syntactic and/or morphophonological operations. When the *vP* is formed, P^0 -insertion occurs. In a transitive clause, either the object or subject may subsequently be deleted, if a higher copy is to be pronounced. If the object is deleted, because it was promoted to Pivot, the PP subject will be realized *in situ* with a case alternation. If, however, the subject is promoted to Pivot, the copy that has undergone P^0 -insertion will be deleted. There will be no evidence that a Distinctness repair has taken place.

In most instances as in (64), the nominative KP will be the transitive subject. However, when the two *vP*-internal KPs include an oblique argument. It will be the non-oblique, regardless of structural position, that undergoes P^0 -insertion. In Dinka, subjects of unergative (65a) and unaccusative predicates both bear genitive case when a locative element is promoted to Pivot in the Oblique Voice (OBLV).

(65) *In Dinka, Genitive case marks all in situ subject* (Erlewine et al. 2015)

- a. $\gamma\ddot{u}t$ a-nìn-e **Ádìt** thín.
house.ABS 3S-sleep-OBLV **Adit.GEN** in.it
‘In the house, Adit is sleeping.’
- b. $\gamma\ddot{u}t$ a-cénne **gálàm** dhuòŋ thín.
house.ABS 3S-PRF.OBLV **pen.GEN** break in.it
‘In the house, the pen broke.’

This behavior is expected if the Distinctness repair in Dinka, like Malagasy, always targets the nominative argument. In most cases that argument will be the structurally highest; however if an unaccusative is combined with an oblique argument, as in (65b), it will be the structurally lower argument that receives nominative case, as the c-commanding nominal is marked with lexical case, rendering case competition and accusative case assignment unavailable. Though see Chapter 4 for an alternative approach that subsumes both Balinese and Malagasy case-alignment facts.

The P^0 -insertion analysis of the case alternation of *in situ* subjects in some Austronesian-type Voice

system languages provides a unified account of the behavior of *in situ* subjects across many Voice systems. *In situ* subjects in these languages often display unique properties, because their presence triggers that realization of Distinctness repairs. Distinctness violations in these languages uniformly target subject KPs. Whenever two KPs are generated within the *vP*, a Distinctness violation arises. It can be remedied either by removing structure as was suggested for Balinese or Malagasy or by adding structure via P^0 -insertion as in Tagalog, Dinka, and Atayal.

Chapter 6

[*uCase*] and nominal morphology

Recall from Chapter 1 that traditional Case Theory has two core components, noun phrase licensing (1a) and noun phrase morphology (1b). Common approaches implicate [*uCase*] in both components. Nominals must be generated in or move to positions where [*uCase*] can be valued, and the value of [*uCase*], in part, determines nominal morphology.

(1) *Core components of Case Theory*

a. *Noun Phrase Licensing*

Noun phrases must be licensed through syntactic dependencies – either by selection (inherent Case) or by an A-dependency within the clause (structural Case).

b. *Noun Phrase morphology*

The Case licensing of noun phrases has ramifications for their case morphology.

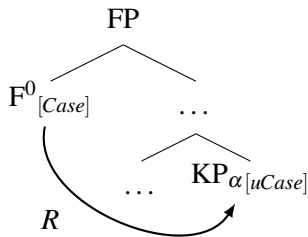
In this dissertation, I have set out to challenge the common approach to modeling the core components of Case Theory. Chapters 2-5 have been chiefly concerned with (1a). In Chapter 2, I argued that the common approach to modeling noun phrase licensing – through obligatory [*uCase*] valuation – is untenable. Like other instances of [*uF*], I showed that [*uCase*] can reach the interfaces in a well-formed derivation. Nevertheless, in Chapter 3, I identified another syntactic property of noun phrases that accounts for aspects of their distribution and form that do not follow from their morphophonological or semantic content. The functional head K^0 is best understood as abstract Case. When nominals have K^0 they are licensed, when they lack K^0 they are not licensed, unless they are able to obviate the proposed Case Filter. In Chapters 4 and 5, I presented two strategies to license nominals that enter the derivation without Case. Nominals that lack Case can be licensed under adjunction or by K^0 -insertion.

What remains to be discussed is what role, if any, [*uCase*] plays in determining the *form* of nominals. In this regard, I suggest that [*uCase*] is relevant. I hold that case morphology determination should follow from how [*uCase*] is valued, if at all. In Sections 1 and 2, I address how [*uCase*] is valued. In Section 3, I address where in the course of the syntactic derivation [*uCase*] is valued.

6.1 The Dependent Case model

As noted in Chapter 2, the *Agree model* of case assignment, which is commonly adopted in current literature, states that case morphology is assigned to a nominal in response to a probe-goal relationship with a functional head. Given a designated case-assigning head F^0 , and a nominal α that is the hierarchically closest nominal c-commanded by F^0 , the case-marking associated with F^0 will be assigned to α . This is schematized in (2):

(2) *The Agree model of case assignment*



The Case-assignment relation R results in distinct values for $[uCase]$ based on the identity of F^0 . These distinct values are (often) realized as distinct case morphology. Nominative case is realized under $[uCase]$ -valuation with (finite) T^0 . Similarly, accusative case is realized under $[uCase]$ -valuation with (active, transitive) v^0 , and genitive Case under $[uCase]$ -valuation with (possessive and event-nominal) D^0 . Additional lexical cases may be assigned by specific functional/lexical heads. Chomsky (2000, 2001) proposes that the case assignment relation R in (2) is parasitic on a simultaneously established relation of ϕ -feature agreement between F^0 and α . Assignment of case morphology under AGREE instantiates a special kind of Agree relation. The goal can have its $[uF]$ valued against the higher, c-commanding probe as a side-effect of an independent iteration of AGREE between the probe and goal (Chomsky 2000, 2001).

I, however, argue for a distinct model of morphological case assignment – the *Dependent Case model*.¹ Under this account, the case a nominal receives is dependent on the presence of other nominals – *case competitors* – in the same local domain, and the syntactic configuration of these nominals with respect to one another. The most famous proposal of this sort is Marantz (1991) (but see Yip et al. 1987 for an earlier proposal which makes many of the same empirical observations). Marantz distinguishes three distinct categories of case:² That are organized in a hierarchy, determining an algorithmic process of case assignment (4).

¹ It is commonly assumed that only one of these accounts is correct, but see Baker & Vinokurova (2010) for an attempt to reconcile the two within a single language. Levin & Preminger (2015) argue that this reconciliation is unwarranted. The choice between case assignment models may be a macroparameter (Baker 2015).

² Marantz suggests a fourth kind of case – default case. Default case was proposed as a means of assigning case to fragment answers and other stand-alone nominals to which lexical, dependent, and unmarked case cannot be assigned. For a discussion of default case, see Schütze 2001. Under the specific implementation of the Dependent Case model implemented here, it is not clear how default case should be distinguished from unmarked case. I return to this point below.

(3) *Typology of case in the dependent case model*

- a. LEXICAL/OBLIQUE CASE (i.e. case determined by the idiosyncractic properties of a particular item, such as quirky case assigning verbs in Icelandic, or particular adpositions).
- b. DEPENDENT CASE (accusative case and ergative case).
- c. UNMARKED CASE (e.g. nominative case assigned to any KP in a clause; genitive case assigned to any KP inside an KP)

(4) *Case disjunctive hierarchy* (Marantz 1991)

lexical/oblique case ≫ dependent case ≫ unmarked case

Case assignment proceeds from left to right in (4) as follows: (i) All nominals that are selected by lexical items which idiosyncratically specify the case of their arguments, including P⁰ and V⁰ that govern quirky case, are assigned the case in question. (ii) Those nominals that did not receive lexical case are evaluated for dependent case. For every pair of as-yet caseless nominals within a local domain that stand in a c-command relation, one will be assigned dependent case. In Marantz's original proposal, the local domain consists of those elements governed by a V⁰+T⁰ complex. However, in recent work (e.g. Baker & Vinokurova 2010; Levin & Preminger 2015), the phase has been taken to be the relevant domain.³ In an ergative language, the c-commanding nominal receives dependent case. In an accusative language, the c-commanded nominal receives dependent case. These patterns are schematized in (5).

(5) *Realizations of dependent case*

- a. *Dependent case downwards*

NP ... NP ^{"ACC"} (nominative-accusative alignment)
└───┬───┘
└───┬───┘

- b. *Dependent case upwards*

^{"ERG"} NP ... NP (ergative-absolutive alignment)
└───┬───┘
└───┬───┘

(iii) Every nominal that has not been assigned lexical/oblique or dependent case in the preceding steps will be assigned unmarked case, which we can informally call 'nominative' or 'absolutive'. Within the nominal domain unmarked case is realized as 'genitive'. In this theory, individual functional heads chiefly play an indirect role. They do assign lexical case, but only define relevant domains for the determination of dependent and unmarked case.⁴

³ To account for case alternations in transitive, non-quirky alignments, e.g. Differential Argument Marking and split ergativity, some have proposed cross-linguistic variability in the typology of case assignment domains additional to or in place of the canonical phasal projections. To capture DOM Baker & Vinokurova take VP not vP to be the phase in Sakha. To capture aspect-based split intransitivity, Coon & Preminger (2015) hold that certain instances of Asp⁰ may introduce a barrier to case-competition.

⁴ Both case assignment operations may apply simultaneously, yielding tripartite case systems (e.g. Deal 2015, Baker 2015). As seen in Chapter 1, the tri-partite case alignment is instantiated by Nez Perce in (i), and schematized in (ii).

In its original formulation, case assignment in the Dependent Case model was said to occur post-syntactically, on the PF-branch (Marantz 1991, McFadden 2004, Bobaljik 2008), but this claim has not gone unchallenged (Legate 2008, Preminger 2011, Richards 2013). Below I argue in favor of a syntax-internal implementation of Dependent Case, permitting [*u*Case] to survive the syntactic derivation unvalued, and implicating [*u*Case] valuation in the determination of nominal morphology.

6.2 Case is configurational

The Agree and Dependent Case models of Case assignment have similar empirical coverage. Consequently, recent research has sought out those environments in which the two can be disambiguated. Arguments against the Agree model of Case assignment (often) have the following underlying logic: case morphology in a given language (or construction) is attested in environments in which an Agree relationship between the nominal in question and the functional head, thought to supply the relevant Case value, cannot hold. There is a mismatch between position of the nominal and/or clause type that the nominal is realized in and surface morphology. Such mismatches have been described in a number of works (e.g. Yip et al. 1987; Marantz 1991; Sigurðsson 1991, 2001; Falk 1991; Harley 1995; Bittner & Hale 1996a,b; Schütze 1997; McFadden 2004; Preminger 2009, 2011; Baker & Vinokurova 2010). Within the Dependent Case model, such patterns are captured, because case assignment is rarely an expression of a KPs relationship to a functional head. Only lexical/oblique case involves a relationship of this sort. All other patterns are expressions of c-command relationships between different KPs in a local domain. I highlight some of these patterns below.

6.2.1 Unmarked case in non-finite clauses

Icelandic quirky case constructions instantiate one of the most well-known mismatches. Nominative case morphology is realized in non-finite environments. If non-finite T^0 does not assign nominative case, this realization is unexpected. Like most languages with rich case-marking, Icelandic has a number of verbs which mark one or more of their arguments with an idiosyncratic case. Some verbs assign their complement

(i) *Nez Perce tripartite alignment* (Rude 1986)

- a. Hi-páay-na háama
3IN-arrive-ASP man.ABS
'The man arrived.'
- b. Háama-**nm** pée-'wi-ye wewúkiye-**ne**
man-ERG 3TR-shoot-ASP elk-ACC
'The man shot the elk.'

(ii) *Dependent case upwards and downwards*

"ERG" NP ... NP "ACC"

(tri-partite alignment)

Furthermore, Baker (2012) suggests languages with no overt case-morphology may employ neither of the operations in (4).

quirky case. Others assign the subject quirky case. Particularly relevant here are constructions involving quirky subjects.⁵

(6) *Icelandic ‘quirky case’ subject* (Marantz 1991)

Henni hefur alltaf þótt Ólafur leiðinlegur
her.DAT has always thought O.NOM boring
‘She has always found Olaf boring.’

Oblique subject phenomena of this type are not restricted to Icelandic. McFadden (2004) notes that they are also found in a number of other languages including Hindi (Mahajan 2000), Georgian (Harris 1984), Japanese and Korean (Ura 1999), Latvian (Berg-Olsen 2001) and Russian (Moore & Perlmutter 2000).

The common analysis of these facts has been to assume that oblique subjects receive structural nominative Case alongside their quirky dative (or accusative, genitive, etc.) morphological case (e.g. Freidin & Sprouse 1991, Chomsky 2000). Morphological case is assigned to KPs in their base-positions when they are first merged, but it is not sufficient to license them. They are additionally forced to enter an Agree relationship with T^0 and/or move to the subject position in Spec-TP. The mechanism that handles morphological case is independent of the one that handles KP-licensing.⁶ This view requires adopting the position that the morphology associated with quirky subjects is outside the normal Case system of a given language. If non-quirky morphological case is determined by a functional head, then the functional head assigning case to nominative objects like that in (6) is expected to be (finite) T^0 .

The difficulty of capturing the case pattern of quirky subject constructions arises when considering case morphology in non-finite clauses, as in (7).

(7) *Non-finite quirky subject clauses* (Marantz 1991)

Ég tel henni hafa alltaf þótt Ólafur leiðinlegur
1S believe her.DAT to.have always thought O.NOM boring
‘I believe her always to have found Olaf boring.’

As Yip et al. (1987) and Marantz (1991) stress, nominative case is available in Icelandic non-finite clauses. If non-finite T^0 is not able to assign nominative case, as is commonly assumed, then there is no local functional head that could possibly assign nominative to the embedded object. Only matrix T^0 would be able to assign nominative case to the embedded object, but AGREE should not be able to hold at such a distance. Matrix T^0 is separated from the embedded object at least by the matrix ν P phase. The Agree model ties the realization of nominative case to an Agree relationship between a KP and (finite) T^0 . A mismatch arises in (7), because

⁵ Unlike e.g. German, Zaenen, Maling & Thráinsson (1985), following Andrews (1976, 1982) and Thráinsson (1979), provide a number of diagnostics that the pre-verbal argument in these sentences is indeed the subject, despite its realization with dative case morphology.

⁶ The present analysis also divorces nominal licensing from nominal morphology, but in a different way. K^0 is responsible for nominal licensing. [u Case] is responsible for nominal morphology.

nominative case is realized in the absence of finite T^0 in the embedded clause. The occurrence of nominative objects in the presence of non-nominative subjects is captured by the Dependent Case model and the case disjunctive hierarchy. The object is c-commanded by a lexically case-marked subject KP; case-competition cannot take place. As such, the object receives unmarked, nominative Case. No functional head is implicated in the realization of nominative case.

A similar mismatch is attested in the ergative-absolutive language Basque (Preminger 2009). Unmarked absolutive case appears on nominals which could not have entered into an Agree relation. This pattern instantiates another mismatch of the general form we are concerned with here. Case is realized where AGREE could not have occurred. Dative nominals in Basque are interveners, disrupting Agree relations. Intervention is attested in Person Case Constraint effects (see, e.g., Rezac 2008), and in long-distance agreement (LDA) relations in ‘substandard’ Basque (Etxepare 2006, Preminger 2009). I provide data from LDA structures below. Note the change in matrix ϕ -agreement that accompanies the change from a benefactive PP to a dative-marked KP in (8).

(8) *Absolutive case arises even without agreement in Basque* (Preminger 2009)

- a. [**Miren-entzat** harri horiek altxa-tze-n] probatu d-**it**-u-zte
M.-BEN stone those.ABS lift-NMZ-LOC attempted 3.ABS-**PL.ABS**- \sqrt -3P.ERG
 ‘They have attempted to lift those stones for Miren.’
- b. [**Lakide-e-i** liburu horiek irakur-tze-n] probatu d- \emptyset /***it**-u-(z)te
colleague-PL-DAT book those.ABS read-NMZ-LOC attempted 3.ABS-**S/*P.ABS**- \sqrt -3P.ERG
 ‘They have attempted to read those books to the colleagues.’

The benefactive PP in (8a) does not intervene, permitting LDA, and yielding plural absolutive agreement on the matrix auxiliary. Conversely, the dative nominal (8b) does intervene, blocking the realization of plural absolutive agreement on the matrix auxiliary. Crucially, in (8b) *liburu horiek* ‘those books’ is, even in the absence of controlling ϕ -agreement, absolutive. The failure of plural agreement in (8b) demonstrates that this absolutive KP is syntactically lower than the dative. As Preminger (2009) stresses, this means that no ϕ -probe, not even v^0 , is close enough to the absolutive argument to Agree with it. Absolutive – an unmarked, structural case like Icelandic nominative – can arise on KPs without entering into a requisite Agree relationship. On the Dependent Case model, absolutive case is a marker of structural position. The nominal in question is not in a position to receive lexical/oblique or dependent Case. No instance of AGREE is required for its realization.

6.2.2 Sakha raising-to-accusative

Mismatches between morphological case and the functional heads thought to supply that case are also attested in the realization of dependent case. Baker & Vinokurova (2010) provide a number of arguments to this end from Sakha, showing that both accusative and dative cases must be treated as dependent cases. I repeat their strongest argument here. Accusative case in the Sakha ‘raising-to-object’ construction is realized

even when the requisite functional head, (active, transitive) v^0 , is not present. The subject of an embedded clause can be marked with accusative case (Vinokurova 2005). This alternation is possible with both complete CPs headed by the complementizer *dien* ‘that’ (9a), and ‘reduced’ participial clauses, consisting of a full vP and (at least) a participial head that displays what Baker & Vinokurova (2010) call “quasi-nominal agreement” with the subject (9b).

(9) **Case variability on Sakha embedded subjects** (Baker & Vinokurova 2010)

- a. Min **ehigi/ehigi-ni** бүгүн kyaj-yax-xyt dien erem-mit-im
 1S.NOM **2S.NOM/2S-ACC** today win-FUT-2PS that hope-PTPL-1SS
 ‘I hoped that you would win today.’
- b. Min **ehigi/ehigi-ni** бүгүн kyaj-byk-kyt-yn ihit-ti-im
 1S.NOM **2S.NOM/2S-ACC** today win-PTPL-2PP-ACC heard-PST-1SS
 ‘I heard you won today.’

Strikingly, accusative case can be realized in environments where there is no functional head to supply it. (10) shows raising into a matrix clause whose predicate is intransitive (*xomoj* ‘become sad’ as opposed to *xomot* ‘make sad’; *tönün* ‘return’ as opposed to *tönnör* ‘make return’).

(10) **Accusative is available with intransitive v^0** (Baker & Vinokurova 2010)

- a. Keskil [Aisen-y [kel-bet dien]] xomoj-do
 K.NOM [A.ACC [come-NEG.AOR.3SS that]] become.sad-PST.3SS
 ‘Keskil became sad that Aisen is not coming.’
- b. Masha [Misha-ny [yaldj-ya dien]] tönnün-ne
 M.NOM [M.ACC [fall.sick-FUT.3SS that]] return-PST.3SS
 ‘Masha returned (for fear) that Misha would fall sick.’

These are clearly unaccusative verbs, and the v^0 associated with them cannot assign accusative case. It is commonly assumed that unaccusative verbs cannot assign accusative. Furthermore, allowing intransitive v^0 to assign accusative case, even if only in Sakha, would falsely predict the realization of accusative morphology on the subjects of simple anticausative intransitives, contrary to fact. Nevertheless, accusative case is possible in (10). Similarly, Baker & Vinokurova (2010) observe that a KP can raise to the edge of the embedded clause, and display accusative case even when the matrix verb is a passive and no (covert) agent is present within the syntax:

(11) **Accusative is available with passive V^0** (Baker & Vinokurova 2010)

- Sargy kim-i daqany tönn-üm-üö dien erenner-ilin-ne
 S.NOM who-ACC PRT return-NEG-FUT.3SS that promise-PAS-PST.3SS
 ‘Sargy was promised that nobody would return.’

These data are unexpected on the view that accusative Case is assigned by a particular functional head, such as active, transitive v^0 . In contrast, the Dependent Case view easily accounts for (10) and (11). When the

subject of the lower clause raises to the edge of the embedded CP, it enters the same domain as the derived matrix subject. This KP is a case competitor for the embedded subject, triggering accusative case on it. Particular functional heads do not factor into the account; all that matters is the presence of another KP.^{7,8}

6.2.3 Korean case stacking

A final argument in favor of the Dependent Case model comes from Korean case-stacking. Again, case morphology is realized, which is unexpected given the absence of the functional head thought to assign it. Case-stacking occurs when a single nominal bears two case-markers simultaneously, illustrated in (12).

(12) *Korean case-stacking*

- a. Cheli-**hanthey-ka** ton-i isse
C.-**DAT-NOM** money-NOM have
'Cheli has money.'
- b. Swunhi-ka Yenghi-**hanthey-lul** chayk-ul cwuesse
S.-NOM Y.-**DAT-ACC** book-ACC gave
'Swunhi gave Yenghi the book.'
- c. Sensayng-nim-tul-**kkeyse-man-i** kulen il-ul hasipnita
teacher-HON-PL-**H.NOM-only-NOM** that.kind work-ACC do
'Only teachers do such work.'

⁷ Baker & Vinokurova (2010) entertain and dismiss an alternative account of case variability that would hold that accusative and nominative KPs are not generated in the same position. For instance, the accusative KP could, in principle, be base-generated in the matrix clause, as an (optional) argument of the matrix verb, forming a prolepsis construction. However, the element 'who PRT', in Sakha, is a kind of negative polarity item which can only be interpreted in the scope of negation (Baker & Vinokurova 2010). Therefore, example (11) provides evidence that not all raising-to-object constructions can be proleptic. A derivation must exist in which the thematic subject of the embedded clause not only occupies a high enough position to get accusative case in the matrix clause, but can also reconstruct to its original position within the embedded clause to be interpreted under embedded negation.

⁸ Baker & Vinokurova (2010) note that support for the movement of accusative embedded subjects into the matrix clause comes from their ability to be bound by an antecedent in the matrix clause. If a pronominal subject is internal to the embedded clause and marked nominative, it can be co-referential with the subject of the matrix clause (ia), but if a pronominal subject is at the edge of the embedded clause and marked accusative, it cannot be (ib).

(i) *Case on embedded subjects interacts with binding* (Baker & Vinokurova 2010)

- a. [Sarsyn min bar-a-byn dien] ihit-ti-m
[tomorrow 1S.NOM leave-AOR-1SS that] hear-PST-1SS
'I heard that I am leaving tomorrow.'
- b. *[Miigin [sarsyn bar-a-byn dien]] ihit-ti-m
[1S.ACC [tomorrow leave-AOR-1SS that]] hear-PST-1SS
'I heard (of me) that I am leaving tomorrow.'

The embedded subject must occupy a position within the matrix clause for purposes of Binding Principle B in (ib). The attested case alternation is not simply an instance of accusative case being assigned into the embedded clause. Rather, the KP must move (at least) to the edge of the CP in order to receive it.

The types of arguments which permit case-stacking are extremely limited. Subjects of dyadic unaccusatives (12a) bear dative-nominative stacking, (some) indirect objects (12b) bear dative-accusative stacking⁹, and agentive subjects deserving of deference (12c) bear nominative-nominative stacking, so long as one of the two is the honorific form of nominative case. For most speakers, case-stacking is only licit in focus-contexts, and even then it is not required (e.g. Suh 1992, Hong 1991, Yang 1999).¹⁰

Case stacking is unexpected in either model of case assignment as described above. Under the Agree model, it is commonly held that a KP bears exactly one [*uCase*]. Once an Agree relationship has been established between a KP and a functional head bearing [*Case*], the nominal will be rendered inactive (Chomsky 2001) for further ϕ -probing and case valuation.¹¹ Case-stacking is barred in the Dependent Case model, as described above, by stipulation. Nominals exit the case disjunctive hierarchy upon case determination. This ensures that, for instance, a lexical case-marked nominal cannot trigger dependent accusative case on a case competitor. For this reason, it is impossible for a nominal to have two case-values.¹²

Levin (under review) proposes the following emendation to the Dependent Case model, as implemented in Korean, to capture the case-stacking.

(13) ***Case-stacking in a dependent case model*** (Levin under review)

Every nominal copy is evaluated for case assignment.

The emendation in (13) forces copies of nominals which have undergone movement to be re-evaluated by the case disjunctive hierarchy. Crucially, a moved nominal will retain its previous case specification, if it had one. That is to say, the copy will be eligible to receive lexical, dependent or unmarked case in accordance with the case disjunctive hierarchy, but if a lower copy of the KP has already been case-marked, i.e. has already received lexical/dependent case, the higher copy will not be able to license dependent case on another KP. Only moved elements which have no case specification (elements which will eventually be nominative-marked) can satisfy the conditions yielding dependent case. However, previously case-marked nominals, while unable to license dependent case, will be able to receive dependent case. Furthermore, movement will never feed lexical case assignment, because movement is never triggered by c-selection. Because the moved copy retains the case specification of the lower copy, a nominal that has undergone movement will be spelled out with multiple case values. On this view, dative-nominative stacking (12a) arises when a lexical case-marked KP undergoes movement, and its second copy is only eligible for nominative case. Dative-accusative stacking (12b), arises when a lexical case-marked argument undergoes movement and its second

⁹ The predicates *cwu*-‘give’, *kaluchi*- ‘teach’, and *cipwul*- ‘pay’ permit indirect object case-stacking. Jung & Miyagawa (2004) in maintain that ‘give’ and related predicates have a distinct syntactic structure from other ditransitives which permits this stacking.

¹⁰ Sells (1995) observes that nominative-nominative stacking is only possible if the subject is focused with the suffix *-man* ‘only’. However, Levin (under review) reports that some speakers permit nominative-nominative case-stacking in the absence of *-man*.

¹¹ Even if the nominal can serve as a target of subsequent ϕ -probing by higher functional heads bearing unvalued ϕ -features, additional Case-valuation is unexpected as the nominal’s sole Case-feature has already been valued.

¹² If dependent case assignment is a feature-valuation process, as I will argue below, case-stacking is barred for the same reason as in the Agree model. Once a nominal’s [*uCase*] is valued, subsequent valuation is impossible.

copy is eligible for dependent case, because another nominal has also undergone movement, and its second copy c-commands that of the indirect object. Lastly, nominative-nominative stacking (12c) occurs when a nominal receives unmarked case on two copies. Levin posits that one of the two instances of unmarked case must be realized as honorific, because two instances of the same case morphology cannot be realized at once, possibly because they compete for exponence (e.g. Cho & Sells 1994; Sells 1995, 1997; Schütze 2001, *contra*. Yoon 2005).¹³

The proposed instances of movement can be independently shown to be real. The presence of stacked case correlates with other movement diagnostics. An element bearing stacked case must take wide scope with respect to negation (cf. Miyagawa 2001) and, if indefinite, must receive a specific interpretation (cf. Diesing 1992). Consider the interpretation of quantified subjects with respect to negation. Miyagawa (2001) demonstrates that Japanese displays EPP-effects by examining the scope interaction of a quantified subject and verbal negation in scrambling contexts. The same effect is detectable in Korean, though to my knowledge it has not been discussed in the literature.¹⁴ Controlling for intonation,¹⁵ speakers report that SOV sentences containing universally quantified subjects take wide scope with respect to short-form negation, while OSV sentences are ambiguous (14).

(14) *Scrambling affects scope possibilities*

- a. Motun namhaksayng-ka ku sihem-lul an-poasse
 all male.student-NOM that test-ACC NEG-saw
 ‘All male students didn’t take that test.’ [$\forall > \neg$; $*\neg > \forall$]
- b. [Ku sihem-lul]_i motun namhaksayng-ka t_i an-poasse
 that test-ACC all male.student-NOM NEG-saw
 ‘That test, all male students didn’t take (it).’ [$\forall > \neg$; $\neg > \forall$]

Scope variability in (14) is surprising. The relative surface position of the subject and negation is unchanged. Why scrambling an element without quantificational force should affect interpretation is mysterious.

The ambiguity in (14b) arises due to the target of scrambling (Miyagawa 2001). Scrambling can target two positions: (i) Spec-TP, in which case the movement is A-scrambling triggered by the EPP-feature on T⁰, or (ii) the specifier of a higher XP, in which case the movement is \bar{A} -scrambling. The position of the scrambled element has consequences for the position of the subject. If the scrambled object occupies Spec-TP, the subject will remain in its base-position. However, if the object \bar{A} -scrambles above Spec-TP then, the

¹³ This account maintains that case-stacking always takes place when movement takes place. Case-stacking is limited to focus contexts, because, in non-focus context, PF operations intervene, allowing only one of the multiple case-marked to be realized. Case-stacking is limited to two case-markers, because there are only two morphological slots for the realization of case morphology.

¹⁴ One of the reasons Miyagawa’s observation may not have been reproduced in Korean is that there is some disagreement among native speakers/researchers regarding the base line judgment, in (29a), that subject QPs necessarily scope over short-form verbal negation (e.g. Suh 1989; Baek 1998). However, this judgment seems to be generally accepted in the literature (e.g. Cho 1975; Cho 1994; Sohn 1995; Hagstrom 1997).

¹⁵ It is crucial that neutral intonation be used in these examples. The inverse scope interpretation goes away if the subject and negated verb occupy distinct major phrases (Ishihara 2007).

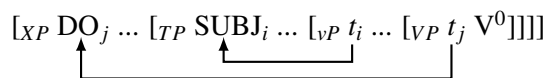
subject undergoes EPP-driven movement to Spec-TP. The two derivations are diagrammed in (15).

(15) **Possible Derivations of OSV Word Order in Korean**

a. *A-scrambling*



b. *Ā-scrambling*



These two possible derivations explain the ambiguity that arises between universally quantified subjects and verbal negation in OSV sentences. Assuming that the negative morpheme heads a NegP that enters the derivation above vP, if the direct object A-scrambles (15a) to Spec-TP, the subject will remain within the scope negation. Conversely, if OSV word order is derived by Ā-scrambling (15b), the subject will move to a position above negation, and necessarily take wide scope.

If we adopt Miyagawa's (2001) analysis, case-stacking is expected to restrict the interpretation of universally quantified subjects with respect to negation in OSV clauses: if case-stacking requires subjects to undergo movement, then case-stacking will make the inverse scope reading impossible. This is the case.

(16) **Case-stacking restricts scope possibilities**

a. Motun sensayngnim-kkeyse-ka ku sihem-lul an-poasse
 every teacher-H.NOM-NOM that test-ACC NEG-saw
 'Every teacher didn't take that test.'

[$\forall > \neg$; * $\neg > \forall$]

b. [Ku sihem-lul]_i motun sensayngnim-kkeyse-ka *t_i* an-poasse
 that test-ACC every teacher-H.NOM-NOM NEG-saw
 'That test, every teacher didn't take (it).'

[$\forall > \neg$; * $\neg > \forall$]

This pattern is also attested for dative-nominative stacking on the subjects of dyadic unaccusatives.

The pattern of nominative-nominative case-stacking is problematic for the Agree model of case assignment. The dative-nominative and dative-accusative patterns can be captured (e.g. Yoon 1996, 2004), but such analyses cannot be extended. If case assignment is achieved by ϕ -probing, then all feature-valuation will be achieved upon the initial probing of the subject by T^0 . Nothing would be gained by a second instance of the same functional head probing the same element to value the same feature. Probing of this kind is redundant. In this respect, the Agree model, with T^0 as the sole nominative licenser, cannot be extended to nominative-nominative stacking.¹⁶ T^0 will probe the honorific agentive subject in Spec-vP in an attempt to value [$u\phi$]. Successful ϕ -agreement ensures simultaneous case assignment, and, furthermore, yields subject honorific agreement on the verb. At this point, T^0 cannot probe the subject again as additional feature valu-

¹⁶ Of course, if there were more than one source of nominative case, the problem could be overcome. However, there is no independent motivation to introduce any other nominative licenser, and such a proposal would face familiar over-generation problems (e.g. the prediction of pervasive pattern of multiple nominative-marked arguments in normal transitives).

ation is unavailable. Assuming all [uF] on T^0 have been valued, additional probing is impossible. In short, under the Agree model, multiple instances of the same case-marker are impossible on a single nominal, because multiple ϕ -probing of one nominal by one functional head is impossible.

This impasse is maintained even if we were to incorporate (29) into the Agree model. The proposed modification for the Dependent Case model ensures that every nominal copy can participate in case competition; let us apply the same emendation to the Agree model. In the case of nominative-nominative stacking, the external argument will be targeted by [$u\phi$] on T^0 . Upon movement to Spec-TP, the nominal will again become a viable goal for ϕ -probing by (29). However, this is not sufficient to yield case-stacking. T^0 still cannot target the external argument again. Within the Agree model, [$uCase$] on a KP is not sufficient to yield case assignment. An unvalued ϕ -probe must initiate the valuation process by targeting the nominal. It is this second ingredient that is lacking in the emended Agree model. Even if the external argument, having moved, is a viable target, and assuming that Agree relationships can be established in Spec-Head configurations, there is still no viable probe to target the nominal in its new position. [$u\phi$] is already valued.¹⁷ On the Dependent Case model, multiple instances of nominative do not require multiple functional heads for a KP to AGREE with. All that is necessitated is multiple copies of a KP which each fail to satisfy the conditions needed to realized lexical/oblique or dependent case.

I take the attested mismatches between the presence of certain case morphology and the absence of the requisite functional heads to indicate that case is configurational, and case-marking is determined by the Case disjunctive hierarchy. One might wonder if four attested mismatches between case realization and necessary functional heads can be used to claim that all languages determine case morphology via the Dependent Case model. Baker (2015) suggests that the case assignment model a language uses is determined by a macroparameter. Some languages determine case morphology by means of the Dependent Case model, others by the Agree model. It would take this work too far afield to discuss the specifics of more languages to determine if they can be modeled in a Dependent Case system. What the data presented in this section has shown is that a Dependent Case model of morphological case assignment is needed in some languages, all things being equal, this model should be pursued further, as a single model for morphological case assignment across all languages is preferable to multiple systems. Future research will be required to determine if this ideal can be maintained.

6.3 Morphological case assignment is syntax-internal

Having established that case-assignment is configurational, and can be captured by the Dependent Case model, I now entertain the question of where the Dependent Case model applies. I have assumed so far that

¹⁷ MULTIPLE AGREE (Hiraiwa 2001, 2004) will not be helpful in this scenario due to the timing of the derivation. In a Multiple Agree relation, a probe targets all possible goals simultaneously. As the external argument has yet to move to Spec-TP when T^0 enters the derivation, that copy will never be visible to T^0 as one of multiple targets.

[*u*Case]-valuation is relevant, but we might imagine morphological case is determined post-syntactically, in which case [*u*Case] may play no role. Given the dissociation of case from other syntactic processes discussed in Chapter 1, some have suggested exactly this (e.g. Marantz 1991/2000, McFadden 2004, Bobaljik 2008, Sigurðsson 2009). Here, however, I present three arguments that the dependent case calculus occurs within the narrow syntax.

6.3.1 Morphological case feeds movement

The clearest evidence that case assignment is syntax-internal comes from the observation that other, unambiguously syntax-internal operations are sensitive to case. For the interaction of case and other syntactic processes to arise, case must be determined in syntax. Preminger (2011, 2014) presents an argument to this effect. The argument proceeds as follows: case-valuation determines which nominal controls ϕ -agreement (Bobaljik 2008). ϕ -agreement is, in some languages, a precursor to (A-)movement (e.g. Chomsky 1995). It is clear that overt movement is syntax-internal as it has ramifications for LF-interpretation (such as creating new antecedents for binding) and PF-interpretation (moved elements can be realized in distinct positions). Therefore, ϕ -agreement and, by transitivity, case assignment must be syntax-internal.

The idea that the presence of an appropriately case-marked KP enables ϕ -agreement, rather than the common view that ϕ -agreement feeds case assignment (e.g. Chomsky 1995, 2000, 2001), can be found in proposals of Bittner & Hale (1996b). This view is developed in greater detail by Bobaljik (2008), and further defended by Preminger (2011, 2014). Both authors take case to be assigned configurationally (post-syntactically on Bobaljik's view, within syntax on Preminger's), and propose that agreement inspects already case-marked nominals, in search of an appropriate target. The appropriateness of a target is evaluated along the Revised Moravcsik Hierarchy (Bobaljik 2008, building upon Moravcsik 1974, 1978) (17).

(17) ***Revised Moravcsik Hierarchy*** (Bobaljik 2008)

unmarked case \gg dependent case \gg lexical oblique case

The Revised Moravcsik hierarchy is the reverse of the Case disjunctive hierarchy (17), and encodes a certain causal relationship between case and ϕ -agreement. Case determines which nominals are eligible for agreement. The hierarchy in (17) forms the basis for a particular kind of parametrization. Per language – or perhaps, per ϕ -probe in a given language – some left-aligned contiguous span of (17) (i.e. some contiguous span that includes unmarked case) is chosen, which determines a set of possible case-markings; any KP bearing one of these case-markings will then be an eligible agreement target.¹⁸

¹⁸ Levin & Preminger (2015) note potential counter-examples to Bobaljik's (2008) generalization. Coast Tsimshian (Dunn 1979) and Semelai (Kruspe 2004) both exhibit agreement with ergative noun phrases, but not unmarked ones. In Burushaski and Amharic, object agreement can target a dative noun phrase, but subject agreement cannot. They stress that (17) is meant to account for agreement in the narrow sense, excluding other agreement-like phenomena – most notably, clitic doubling (see Anagnostopoulou 2006). As such, if operations that may conventionally be referred to as 'object agreement' are in fact instances of clitic doubling, they would not be counter-examples at all (see Kramer 2014 on Amharic, *contra*. Baker 2012). It remains to be seen if similar

The Revised Moravcsik hierarchy correctly captures the patterns of agreement in instances where grammatical function and morphological case diverge, and provides a uniform implicational hierarchy that treats nominative-accusative and ergative-absolutive languages identically. In a nominative-accusative language, the parametrization in (18) would yield agreement with nominatives only.

(18) *Unmarked-only agreement*

unmarked case >> dependent case >> lexical/oblique case
available for ϕ -agreement

This pattern of agreement is found in many languages (including English, for example), but is perhaps most vividly exemplified by Icelandic. In a canonical transitive, the nominative subject controls agreement (19a). In quirky subject clauses, it is the nominative object that controls agreement (19b).

(19) *Nominative KPs control ϕ -agreement in Icelandic* (Preminger 2014)

- a. Þeir seldu bókina
 3P.NOM sold.PL book.the.S.ACC
 ‘They sold the book.’
- b. Jóni líkuðu [þessir sokkar]
 J.DAT liked.PL [these socks].NOM
 ‘Jon liked these socks.’

In both (19a) and (19b), the verb bears plural agreement morphology. As only one argument in each sentence is plural, we can identify the unambiguous controller of agreement. In (19a), it is the nominative subject. In (19b), it is the nominative object.

Note that the same parameterization of the Revised Moravcsik Hierarchy immediately accounts for ergative-absolutive languages, like Tsez, in which agreement always targets the absolutive argument.

(20) *Absolutive KPs control ϕ -agreement in Tsez* (Preminger 2014)

- a. Ziya b-ik’i-s
 cow.III.ABS III-go-PST.EVID
 ‘The cow left.’
- b. Eniy-ā ziya b-išer-si
 mother-ERG cow.III.ABS III-feed-PST.EVID
 ‘The mother fed the cow.’

Ziya ‘cow’, subject in (20a) and object in (20b), controls agreement, in both instances.

Expanding the domain of eligible agreement targets from unmarked to include unmarked and dependent case-marked KPs creates scenarios in which more than one KP may be eligible to control agreement. In such cases, the structurally highest, eligible KP controls agreement. In Nepali, both unmarked and dependent arguments can be formulated for other counter-examples. Alternatively, it may be possible to parameterize a non-left aligned section of (17) as being accessible for agreement.

case-marked nominals can control agreement (21).

(21) *Unmarked and dependent KPs control ϕ -agreement in Nepali* (Bobaljik 2008)

- a. **Ma** yas pasā-mā patrikā kin-ch-**u**
1S.NOM DEM.OBL store-LOC newspaper.NOM buy-NON.PST-**1S**
 ‘I buy the newspaper in this store.’
- b. **Maile** yas pasā-mā patrikā kin-ē/*-yo
1S.ERG DEM.OBL store-LOC newspaper.NOM buy-PST-**1S/*-3S.M**
 ‘I bought the newspaper in this store.’

In (21), agreement is controlled by the subject, even though the subject is in the unmarked case in (21a) and the dependent case in (21b). However, Nepali cannot be characterized as a language in which agreement always targets the subject. When the subject bears lexical/oblique case, it is inaccessible for agreement. Rather, agreement is controlled by the unmarked object (22).

(22) *Lexical/oblique case does not control ϕ -agreement in Nepali* (Bobaljik 2008)

- Malāi **timī** man par-ch-**au/*-u**
1S.DAT 2S.M.H.NOM liking occur-NONPST-**2S.M.H/*-1S**
 ‘I like you.’

Agreement in Nepali is best characterized as agreement with the highest KP bearing unmarked or dependent case. This is captured by the following parameterization of the Revised Moravcsik hierarchy (23).

(23) *Unmarked and dependent agreement*

unmarked case \gg dependent case \gg lexical/oblique case
 available for ϕ -agreement

Both dependent and unmarked nominals control agreement (37). When both are present, it is the structurally highest one that controls agreement (37a). However, when a lexical/oblique nominal is structurally highest, agreement is controlled by the unmarked object (22). Lexical/oblique KPs are unable to control agreement, in Nepali.

Bobaljik’s proposal is also able to derive a typological gap in the cross-linguistic inventory of case and agreement alignments. In languages that have overt case and agreement morphology one can separately classify the alignment (e.g. nominative-accusative or ergative-absolutive) of the case system and of the agreement system. A language has nominative-accusative agreement if agreement always cross-references the subject regardless of transitivity of the predicate (e.g. English; *John walks, John likes donuts*). A language shows ergative-absolutive agreement if agreement targets the intransitive subject but transitive object (e.g. Tsez (36)). These distinctions describe canonical clauses, and may be obscured by quirky subject constructions, as in Icelandic (35). Languages also attest ergative-absolutive case alignments, but nominative-accusative agreement. This is seen in (37b) for Nepali and also attested in Walpiri (Legate 2002).

The case of the transitive object is distinct from that of intransitive subjects and transitive objects, but verbal agreement always cross-references the subject, regardless of case. The opposite case-agreement mismatch – nominative-accusative case with ergative-absolutive agreement – is never attested (Anderson 1977; Comrie 1978; Dixon 1979, 1994). Such a language would uniformly mark subjects of transitive and intransitive clauses in the same manner, but would target intransitive subjects and transitive objects for agreement.

The interaction of case accessibility and structural height captures this paradigm gap. A language that has a nominative-accusative case alignment may display either the case accessibility parameterization in (34) or (39). The same is true of ergative-absolutive case languages. Tsez instantiates (34), Nepali instantiates (39). If a nominative-accusative case language only allows nominative-marked elements to control agreement, the structurally highest element in canonical clauses will control agreement. Similarly, even if the language allows nominative and accusative-marked KPs to control agreement, the structurally highest element will still control agreement. In a nominative-accusative language the structurally highest nominal is always the nominative element. Unlike in ergative-absolutive languages where parameterizing case accessibility to (34) or (39) provides different agreement patterns, distinct parameterizations in a nominative-accusative case alignment language have no effect on altering the target of agreement.

These results strongly suggest that the case-marking borne by potential agreement targets plays a role in determining whether or not they will be targeted for ϕ -agreement. As ϕ -agreement is conditioned by morphological case values, if we can show that ϕ -agreement is syntax-internal, we must conclude that case assignment is also syntax-internal.

Like ϕ -agreement, movement is also sensitive to case. Different languages permit different case-marked elements to move. As we have already seen, Icelandic permits non-nominative arguments to occupy the canonical subject position. This is not the case for languages like English and French in which the canonical subject position is always occupied by a nominative KP. This point can be re-enforced by examining raising constructions in both languages. In Icelandic, a raising predicate with a dative experiencer arguments permits the dative argument to move to subject position (24a). Attempting the same movement in French yields ungrammaticality (24b).

(24) *Dative experiencers can move ... sometimes* (Preminger 2014)

- a. Dómurunum_i virtist t_i konan hafa skrifað bókina
judges.the.DAT seemed woman.the.NOM have.NF written book.the.ACC
'It seemed to the judges that the woman had written the book.'
- b. *[A Marie]_i semble t_i Jean avoir du talent
to M. seem J. have.NF of talent
'It seemed to Marie that Jean has talent.'

It is also impossible to move the embedded nominative subject across the experiencer in French. When the experiencer argument is absent, such movement is licit (25).¹⁹

¹⁹ Spanish (Torrego 1996), Greek (Anagnostopoulou 2003), Italian (Rizzi 1986), and English (Hartman 2011a,b) behave similarly.

(25) **French dative intervention** (McGinnis 1998)

Jean_i semble (*a Marie) t_i avoir du talent
J. seems (*to M.) have.NF of talent
'Jean seems (to Marie) to have talent.'

Preminger suggests that in languages like French (and English), only those elements that can serve as the target of ϕ -agreement can subsequently move to subject position. In (24b), movement of the experiencer argument is unavailable, because agreement with dative-marked elements is unavailable. Similarly, movement of the nominative, embedded subject is unavailable, because agreement with the embedded subject is unavailable. This can be shown independently, when no argument raises. A plural nominative-marked element that remains *in situ* does not trigger agreement across a dative experiencer (Bošković 2002, 2007).

(26) **Dative interveners block ϕ -agreement** (Bošković 2007)

- a. Il semble au général être arrivé deux soldats en ville
EXPL seems.SG to.the general to.be arrived two soldiers in town
'There seem to the general to have arrived two soldiers in town.'
- b. Il semble au général y avoir deux soldats manquants à la caserne
EXPL seem.SG to.the general to.have two soldiers missing at the barracks
'There seem to the general to be two soldiers missing from the barracks.'

In both examples in (26), the embedded subject is plural – *deux soldats* 'two soldiers'. However, the raising verb *semble* 'seem' displays singular agreement. The inability for an embedded subject to raise across a dative experiencer is captured, because ϕ -agreement cannot occur across the dative intervener. If ϕ -agreement is a precursor to movement in French these facts fall out.²⁰

If ϕ -agreement is sensitive to case, and ϕ -agreement is, in some instances, a precursor to movement, then we can be sure that case assignment is syntax-internal, because (overt) movement is syntax-internal. This is the strongest argument I know of that case is unambiguously syntax-internal.²¹ It is impossible to reduce movement entirely to morphological operations. If case assignment must be a precursor for movement than it must be syntax-internal.

²⁰ Preminger argues that this view, under which movement is sensitive to successful ϕ -probing, is superior to a position in which both ϕ -agreement and movement are independently case-sensitive. He notes that while Icelandic demonstrates that not all languages require ϕ -agreement to target the moved nominal, no language demonstrates the inverse pattern where only some arguments targeted for ϕ -agreement are capable of movement. Such a language should be attested if case-sensitivity of the two operations were independent. In other words, movement can obey the sensitivity to morphological case of ϕ -agreement or ignore it, but movement cannot establish its own morphological case sensitivity.

²¹ The phenomenon of syntactic ergativity may also be viewed as an instance of a syntactic phenomenon that is sensitive to case. Broadly construed, syntactic ergativity describes any syntactic operations that group the absolutive arguments, intransitive subject and transitive object, together, to the exclusion of the ergative argument, the transitive subject. The effects of syntactic ergativity have been claimed to surface in a number of independent operations, including \bar{A} -movement, co-reference across clauses, co-referential deletion, scope, binding, quantifier float, raising, control, and other dependencies (e.g. Kazenin 1994, Manning 1996). The basic pattern of syntactic ergativity, instantiated in \bar{A} -movement, is illustrated below for the Mayan language Q'anjob'al. The

6.3.2 Case concord

A second category of arguments in favor of syntax-internal case assignment comes from derivational timing (e.g. Legate 2008, Richards 2013). The realization of case interacts with morphological operations. If case assignment is determined within the narrow syntax, it is expected that morphological operations should be able to subsequently alter the realization of case. An analysis in which all of case is determined post-syntactically would need to be modified to accommodate two levels of case assignment. Given this, the morphological determination of case is dispreferred on grounds of simplicity.

The behavior of case assignment and nominal concord in Lardil (Tangkic; Australia) provides an argument that case assignment must be syntax-internal (Richards 2013). The language shows a dichotomy in how lexical/oblique and dependent cases interact with nominal concord. Accusative case in Lardil is obscured when further nominal morphology is assigned via tense concord; instrumental case is not.

(27) *Tense concord overwrites accusative but not oblique case in Lardil* (Richards 2013)

- a. Ngada latha liban-i kurrumbuwa-r
 I spear pumpkinhead-ACC multi.pronged.spear-INST
 ‘I speared the pumpkinhead with a multi-pronged spear.’

absolutive KP, cross-referenced by absolutive agreement on the verb, can relativize, leaving a gap at the extraction site (ia,b), but relativization of the ergative KP, cross-referenced by a distinct agreement paradigm, is ungrammatical (ic).

(i) *Syntactic ergativity in Q’anjob’al wh-questions* (Coon et al. 2014)

- a. Maktxel_i max way-i *ec_i*
 who ASP sleep-ITV
 ‘Who slept?’
- b. Maktxel_i max y-il[-a’] naq winaq *ec_i*
 who ASP 3.ERG-see-TR CLF man
 ‘Who did the man see?’
- c. *Maktxel_i max-∅ y-il[-a’] *ec_i* ix ix
 who ASP-3.ABS 3.ERG-see-TR CLF woman
 ‘Who saw the woman?’

The interaction between case and syntactic processes is apparent. The case a nominal bears has ramifications for the well-formedness of \bar{A} -movement. Indeed, a number of analyses have implicated Case in analyzing these facts (see Polinsky 2014 for a review). A number of approaches to syntactic ergativity explain its effects as arising from the status of the *absolutive* KP. The ban on ergative extraction follows from the structure of the absolutive; the absolutive argument must vacate the ν P first, for reasons that vary from account to account. The movement of the absolutive argument blocks subsequent movement of the ergative argument (e.g. Campana 1992, 1993; Murasugi 1992; Bittner & Hale 1996a; Aldridge 2004, 2008; Legate 2006, 2008; Coon et al. 2014). Another set of analyses explains syntactic ergativity by arguing that the ergative argument in syntactically ergative languages is not a KP, but a PP (e.g. Stepanov 2004; Markman & Grascenkov 2012; Polinsky 2015). If PP arguments are inaccessible for \bar{A} -operations, syntactic ergativity can be explained. Alternatively, we might imagine that *wh*-probing is sensitive to morphological case much like ϕ -probing. However, there is no consensus in the literature as to the cause of syntactic ergativity nor to which phenomena an account of syntactic ergativity should be applied. Many analyses do employ syntax-internal case assignment as an ingredient in capturing syntactic ergativity (but see e.g. Otsuka 2015 for a recent attempt to reduce syntactic-ergativity in Tongan to morphological operations). If a syntactic approach is correct, it may provide another argument for syntax-internal case assignment.

- b. Ngada la-**thur** liban-**kur** kurrumbuwa-**ru-r**.
 I spear-FUT pumpkinhead-FUT multi.pronged.spear-INST-FUT
 ‘I will spear the pumpkinhead with a multi-pronged spear.’

In the non-future tense, (27a), accusative case morphology is realized on the object *liban* ‘pumpkinhead’. In the future tense, (27b), accusative case does not surface. However, instrumental case is realized on *kurrumbuwa* ‘multi-pronged spear’, regardless of tense specification. In the future tense, future morphology is stacked on top of instrumental case. We can be sure that accusative case is still assigned in (27b), because tense concord does not obscure case-marking on relative clauses.

(28) *Accusative still surfaces on relative clauses* (Richards 2013)

- Ngada kurri-**thu** karnjin-**ku** [ngithun thabuji-**kan-i** la-**tharrba-Ø**]
 I see-FUT wallaby-FUT my older.brother-GEN-ACC spear-NONFUT-ACC
 ‘I want to see the wallaby that my older brother speared.’

The realization of accusative case on part of the direct object suggests that the entire nominal received accusative case at some point in the derivation.

Richards (2013) argues that a post-syntactic account of case assignment cannot (reasonably) capture these facts. If accusative case were assigned post-syntactically, then there must be a Spell-out domain that contains the relative clause, and is at least as large as νP , ensuring a local case competitor for the object – the subject in Spec- νP . This domain necessarily contains the direct object, yielding a puzzle for how the direct object is not assigned accusative. Subsequent post-syntactic operations could delete accusative case from the direct object in the presence of tense concord. However, relying on such operations fails to capture that not all cases are deleted in the domain of tense concord. Accusative is deleted, but instrumental case is retained (27). If the operations that are responsible for the distribution of case morphology are entirely post-syntactic, then it is a mystery why they should be sensitive to the semantic contentfulness of case morphemes. Placing case assignment within the narrow syntax avoids these issues. Accusative case could be assigned in the syntax to the object and be realized on the relative clause via case concord. At this time, the relative clause could be spelled out on its own, without the head noun that it modifies. The head noun can then be subject to further instances of nominal concord resulting in the obscuring of accusative case, without altering the realization of the relative clause.

Case mismatches within nominals can also be captured by an indirect mapping of syntax-internal case assignment to its morphological realization (e.g. Legate 2008). The Pama-Nyungan languages of Australia commonly show split-ergativity based on nominal type; in Djapu certain nominals may inflect according to an ergative-absolutive pattern (or tri-partite alignment). Others, including pronouns, show a nominative-accusative pattern. Human and higher animate nominals display a tri-partite alignment.

(29) *Tri-partite alignment in Djapu* (Legate 2008)

- a. Ngarritj nha:-ma wa:yin-gu
Ngarritj.NOM see-UNM animal-DAT
'Ngarritj is looking for animal(s).'
- b. Mak rlinygu-n galka-y' ba:pa-'ngali-n dharpu-ngal
maybe already-IM sorcerer-ERG father-KIN.PROP-ACC spear-PRF
'Maybe a sorcerer has already speared your father.'

In (29), the transitive subject *galkay* 'sorcerer' bears ergative, the transitive object *ba:pa'ngalin* 'father' bears accusative, and the intransitive subject *Ngarritj* appears in the unmarked nominative. Words exhibiting ergative-absolutive marking include: most *wh*-words, determiners/demonstratives, lower animates, and inanimates.

(30) *Ergative-absolutive alignment in Djapu* (Legate 2008)

- a. Dharpu-ngal ngarra-n dhandurrung-dhu gatapanga-y
pierce-PRF 1S-ACC horn-ERG buffalo-ERG
'The buffalo's horn has pierced me.'
- b. Mutika' nhawi-yi-n rirrakay gärr-i-n dhipal
car.ABS whatsit-INCH-PRF sound.ABS enter-PRF this.ALL
'The sound of a car has gone into this [tape recorder].'
- c. Ngali djäma bunhbu djamarrkulhi-w'
1D.INCL.NOM make shelter.ABS children-DAT
'We'll make a shelter for the children.'

The intransitive subject *mutika* ... *rirrakay* 'sound of a car' (30b) and the transitive object *bunhbu* 'shelter' (30c) bear the same morphology to the exclusion of the transitive subject *dhandurrungdhu gatapangay* 'buffalo's horn' (30a).

In Djapu, all elements of a KP, whether continuous or discontinuous, must be marked for case and match in case. This is illustrated in (30a) and (30b). The combination of a demonstrative (ergative-absolutive alignment) and a human noun (tri-partite alignment) results in case mismatches. The KP *ngunhinydhi yolngun* 'that person' in (31) consists of a demonstrative marked as absolutive and a head noun marked as accusative.

(31) *KP-internal case mismatch* (Legate 2008)

- Wungay' marrtji-nya ngunhi-ny-dhi yolngu-n
honey.ABS go-PST.NINDIC that.ABS-ANAPH-PRO person-ACC
wapirti-warrtju-na-puyngu-nha-ny weka-nha
stingray-spear.PL-NML-INHAB-ACC-PRO give-PST.NINDIC
'We would go and give honey to those people who were spearing stingrays.'

Such examples illustrate the absolutive as a morphological default for the demonstratives in Djapu. The entire KP is assigned accusative. However, the realization of accusative is conditioned by the nominal type

on which it is realized, instantiating a two-part case realization system. The first determines the value of $[uCase]$ on a given KP. The second determines the realization of $[(u)Case]$ on a given KP. The syntactic view of $[Case]$ valuation immediately provides the locus of the two-part case realization system. The first is in the syntax. The second in the morphology.

Before turning to the last argument in favor of a syntax-internal approach to morphological case-assignment, it should be noted that both Legate (2008) and Richards (2013) provide analyses of the concord phenomena they investigate in terms of the Agree model of case assignment. However, their arguments in favor of syntax-internal case assignment can be maintained without the specific model they advocate. By placing the Dependent Case model within the narrow syntax, the problems they highlight for morphological approaches to case assignment can be overcome.

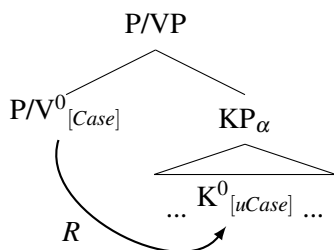
6.3.3 Deriving the case disjunctive hierarchy

Finally, a conceptual advantage of syntax-internal dependent case assignment is that the Case disjunctive hierarchy, repeated below, can be derived from the order of Merge (Preminger 2011, 2014).

- (32) *Case disjunctive hierarchy* (Marantz 1991)
 lexical/oblique case \gg dependent case \gg unmarked case

In short, (32) simply reflects how syntactic structure is built. Lexical/oblique case is the realization of Case that is assigned to a KP by virtue of the idiosyncratic properties of a lexical head that selects it. If lexical selection occurs under immediate c-command (or m-command to capture quirky subjects²²), this means that lexical/oblique case is assigned immediately upon External Merge (33).

- (33) *Lexical/oblique case assignment*



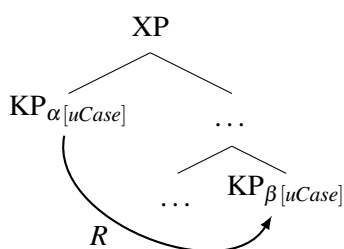
In the Dependent Case model, the lexical/oblique case assignment relation is unique. Unlike the dependent case assignment relation which occurs between two KPs. Lexical/oblique case arises due to the formation of an Agree relationship between a functional head and a KP. Given a designated case-assigning head F^0 , and a KP α that is c-commanded (or m-commanded) by F^0 , the case-marking associated with F^0 will be assigned

²² On a Bare Phrase Structure approach to syntactic structure building, the specifier is still a sister of (an instance of) the head – since the label is the head – and so there is no need to invoke a separate structural relation for specifiers. Both complements and specifiers are sister to the head.

to α . The specific value for [$uCase$] on α will depend on the lexical properties of the selecting head. This allows for different verbs and prepositions to assign different cases to the KP, and accounts for the status of lexical/oblique case as first in the Case Disjunctive hierarchy. Furthermore, this allows for verbs and prepositions to be underspecified with respect to [$Case$] value. A verb or preposition that bears no [$Case$] specification will not assign case to its complement, permitting case competition.

As additional structure is added to the derivation, a second nominal may be merged in the same phase. This nominal, too, has the ability to immediately undergo lexical/oblique case assignment with its selecting head. If it does not, the requisite structure for Dependent Case assignment will be established, as in (34).

(34) *Dependent case assignment*



There are a number of strategies that could be employed to model how dependent case is assigned within the syntax. First, two KPs, α and β , could establish a relationship *with each other*. It is possible that this relationship results in the valuation of one of the two nominals in question. On this view, dependent case is essentially a [$Case$]-value indicating "I have (been) c-commanded (by) another KP with [$uCase$]." (Preminger 2011, 2014). The directionality of this valuation is determined by the case alignment of a given language. This implementation is stipulative and unlike any other instance of feature-valuation. It may not even be achieved via AGREE. Alternatively, if two KPs enter a c-command relationship and neither bears a valued [$Case$], they may share their unvalued feature via AGREE (Pollard & Sag 1994, Brody 1997, Frampton & Gutmann 2000, Frampton et al. 2000, Pesetsky & Torrego 2004). The relation schematized in (34) creates a feature-sharing relationship and annotates β as being the target of probing by [$uCase$] on α . Crucially on this view neither [$uCase$] on α or β will be valued. Even in the absence of [$Case$]-valuation, a distinction can be made between two shared unvalued-features. One feature will have initiated probing while the other will have been the target of probing.²³ Note that the dependent case relation, on either view, is a direct encoding of c-command relationships between nominals. It is not mediated by functional heads, as originally suggested by Marantz (1991) or subsequent syntax-internal implementations (e.g. Bittner & Hale 1996a,b). This account allows us to capture the behavior of the Sakha raising-to-object construction

²³ Similar feature-sharing relationships between KPs have been recently proposed for Agree-based treatments of Binding Theory (e.g. Reuland 2011, Rooryck & Vanden Wyngaerd 2011) and control (e.g. Landau 2004). However, the notion that such feature-sharing can survive the derivation without eventual valuation may be limited to the domain of case-assignment. I have nothing to say about why this should be, but note that such a possibility is expected under a model whereby multiple instances of [uF] can enter into feature-sharing relationships via AGREE and [uF] can survive the derivation.

(24-27), which involve intransitive verb forms that should be unable to mediate dependent case relations. Recall that accusative case morphology is available on subjects that have raised into unaccusative (35) and passive (36) clauses.

(35) *Accusative is available with intransitive v⁰* (Baker & Vinokurova 2010)

- a. Keskil [Aisen-y [kel-bet dien]] xomoj-do
 K.NOM [A.ACC [come-NEG.AOR.3SS that]] become.sad-PST.3SS
 ‘Keskil became sad that Aisen is not coming.’
- b. Masha [Misha-ny [yaldj-ya dien]] tönün-ne
 M.NOM [M.ACC [fall.sick-FUT.3SS that]] return-PST.3SS
 ‘Masha returned (for fear) that Misha would fall sick.’

(36) *Accusative is available with passive V⁰* (Baker & Vinokurova 2010)

Sargy kim-i daqany tönñ-üm-üö dien erenner-ilin-ne
 S.NOM who-ACC PRT return-NEG-FUT.3SS that promise-PAS-PST.3SS
 ‘Sargy was promised that nobody would return.’

I have nothing to say regarding the feasibility of either of the proposed implementations of the dependent case relationship above, or any other possible formulations.^{24,25} Because dependent case requires the presence of two nominals, but applies as soon as possible,²⁶ it will occur after lexical/oblique case, and is second in the Case disjunctive hierarchy.²⁷

²⁴ Richards (2010) suggests that dependent case may be subsumed as an instance of a larger group of processes concerned with the presence of similar elements too close together – Distinctness. Recall from Chapter 4 that Distinctness mandates that elements of the same type cannot be too close together. If two KPs, bearing [*uCase*], are in the same phase, they may be too close together. On this view, dependent case arises to render one of the two (or both) nominals distinct.

²⁵ Pesetsky (2010) suggests that dependent case be reduced to a binding theoretic relation between non-coreferential nominals.

²⁶ The ability of syntax-internal case assignment to take place ‘as soon as possible’ is, itself, a conceptual benefit of the model (Legate 2008, Baker & Vinokurova 2010). If case is assigned at PF, the morphology must have access to the distinction between A- and \bar{A} -chains in order to correctly assign case to KPs that have undergone \bar{A} -movement. However, as Legate (2008), notes access to A- and \bar{A} -chains does not solve the ordering problems for KPs that have undergone *A-scrambling* as in (some instances of) Korean OSV clauses, above. A-scrambling of the object does not affect its case morphology. On a syntactic analysis, this is expected, because the case of the object is determined before scrambling. However, for a post-syntactic analysis, determining the correct case assignment is more difficult. Assuming post-syntactic case assignment requires ignoring *some*, but clearly not *all*, movement operations. It would then seem that determining the correct subset of movement to ignore seems to require bringing an large amount of syntax into PF.

²⁷ It should be noted that the model of case assignment outlined here is able to subsume analyses of ergative case as a lexical/oblique case (e.g. Woolford 1997 *et seq.*; Legate 2002 *et seq.*; and Aldridge 2004, 2008). These views hold that ergative case is not a dependent case, but a lexical case assigned by *v⁰* to its specifier. As lexical/oblique case assignment is independently required in the Dependent Case model, we can maintain this view of ergative. Allowing for distinct means of realizing ergative case is, in fact, desirable. As Polinsky (in press) argues, there are reasons to think that not all ergative case is the same. One way of capturing this difference is to treat some instances of ergative as dependent and others as lexical/oblique. The dependent case model and the Agree model are not, however, notational variants. Ergative case is special, because it can be assigned under *c*-selection. Nominative and accusative cases cannot be modeled as lexical cases, because, under common assumptions, they *are not* assigned under *c*-selection.

Unmarked case is the last possibility in the Case Disjunctive hierarchy, because it is not an instance of *case assignment* at all (Kornfilt & Preminger to appear; Preminger 2011, 2014). This position was argued for in Chapter 2, where we saw that syntactic derivations can tolerate [*uF*], including [*uCase*] at the interfaces. Unmarked case is the realization of [*uCase*], only available to those KPs whose position within the clause is such that neither lexical/oblique (35) or dependent (36) case assignment can apply. It is the realization of those KPs which survive the derivation without Case. The logic of this treatment is similar to that of Bittner (1994) and Bittner & Hale (1996a,b) who posit that unmarked case is the complete absence of Case, i.e. K^0 , as supported by the cross-linguistic generalization that unmarked case has no overt exponence. However, recall that this generalization is not absolute. In Section 2.1, it was observed that languages like Niuean and Japanese have display overt case morphology for both dependent and unmarked case. Positing that [*uCase*] is present on all KPs, but that it remains unvalued on unmarked KPs, permits the attested realizations of case morphology. Below, I provide a novel argument for this view of unmarked case.

Marantz (1991) suggests that the realization of unmarked case can be conditioned by the domain in which a KP is realized. Unmarked case in the clausal domain is what we would otherwise label ‘nominative’ or ‘absolutive’, while unmarked case in the nominal domain is ‘genitive’. Levin & Preminger (2015) provide an account of the case and ϕ -agreement patterns in Sakha which also yields this result. I adopt this view here. Vocabulary Insertion for [*uCase*] is domain sensitive. The realization of this feature may be affected by the domain in which it occurs. But Marantz (1991) also suggests a fourth category of case which we have not discussed – default case. For Marantz, default case is a means of ensuring that all nominals receive case, even when they do not satisfy the conditions for lexical/oblique, dependent, or unmarked case. In English, default case is accusative and realized on KPs such as fragment answers and within coordinated subjects.

(37) ***Default accusative in English***

- a. (Q: Who’s been eating all the cookies?) A: **Me**.
- b. **Me** and **him** went to the store.

If the fragment answer (37a) is derived from the string *I’ve been eating all the cookies* via deletion (e.g. Merchant 2001), the realization of accusative case is unexpected.²⁸ Similarly, non-coordinated subjects require nominative case *I/he went to the store*. Nevertheless accusative is available, and for some speakers preferred or required, in (37b). Schütze (2001) examines other domains of default case in a number of languages. On the view of case assignment implemented here, there is no room for default case. It is no different than unmarked case. Unmarked case arises when [*uCase*] remains unvalued. A nominal bearing unmarked case has not satisfied any of the conditions for case assignment. This is exactly the prerequisite for realizing default case in Marantz’s formulation. The categories of unmarked and default case must be collapsed. This may be achieved by expanding the domain sensitivity. If nominative and genitive case are

²⁸ If fragment answers are, however, based on the deletion of a short source (e.g. Griffiths & Lipták 2011) – *It was me* – the presence of accusative case is unsurprising.

both the realization [*uCase*], conditioned by the domain in which they are realized, we may imagine that default case contexts are also triggered by domain specifications; default case is [*uCase*] in non-clausal and non-nominal domains. Alternatively, (some) default case environments may have independent case licensors, akin to lexical/oblique case, accounting for their form.

The arguments in this subsection have converged on the conclusion that the Dependent Case model should be viewed as a syntax-internal, feature-valuation process. This conclusion is important to the overall argumentation in the dissertation, because in the following chapters, I will demonstrate that post-syntactic operations can be employed to satisfy Case Filter violations. In other words, post-syntactic processes render Caseless arguments, i.e. arguments lacking K^0 , invisible to the Case Filter – the ban on arguments lacking K^0 . The order of operations indicates that these post-syntactic processes do not bleed application of Case assignment, but rather can be viewed as a response to the unavailability of Case.

6.4 Conclusion

In this chapter, I have suggested that, though [*uCase*] does not play a role in nominal licensing, it does play a role in nominal morphology. How [*uCase*] is valued, if it is valued at all, (helps to) determine the form of nominals. I argued that the proper means of modeling morphological case assignment is via the Dependent Case model, whereby case morphology is frequently determined by the presence or absence of other nominals – case competitors – in a local domain. This model differs from common analyses which hold that [*uCase*] is uniformly valued via Agree relationships with functional heads. I further argued that case morphology is, in fact, determined within the narrow syntax, ensuring that the syntactic feature [*uCase*] can be active in determining nominal morphology.

With this theory of morphological case determination in place, I have addressed both of the core components of Case Theory – nominal licensing and nominal morphology. I have posited that these phenomena should be modeled as distinct systems as in (38).

(38) ***Core components of Case Theory***

- a. *Noun Phrase Licensing*
Noun phrases must be KPs.
- b. *Noun Phrase morphology*
[*uCase*]-valuation influences case morphology.

K^0 is abstract Case. Its presence allows nominals to be licensed. As we have seen in Chapters 3-5, when a noun phrase is base-generated without K^0 alternative licensing strategies must be employed to either obviate or subsequently satisfy (38a). Syntax-internal [*uCase*]-valuation does however play a role in determining case morphology (38b) and interacts with other syntactic operations – namely movement.

Chapter 7

On the distribution of KPs

In Chapter 2, I presented arguments that [μ F] can survive the derivation. This result has immediate ramifications for the traditional Case Filter, repeated in (1), and, more generally, for how the grammar can restrict the distribution of KPs.

(1) **Common Case Filter:** A Noun Phrase with unvalued Case is ill-formed

*[Noun Phrase $[_{\mu}Case]$]

In the AGREE framework, the Case Filter is a subcase of the general requirement that [μ F] be valued during the course of the derivation. If the requirement to value [μ F] is untenable, the subcase – that [μ Case] must be valued – is also untenable. [μ Case] can survive the derivation. An argument in favor of the view that unmarked case be treated as unvalued Case was presented in Chapter 2. Nevertheless, in Chapters 3-5, I suggested that the proposed Case Filter, (2), is real.

(2) **Proposed Case Filter**

Noun Phrases must be KPs

The Case Filter is not a requirement on feature-valuation, but rather a requirement of nominal size. Noun phrases must host K^0 in order to be complete extended projections. Those that are smaller than KP cannot survive the derivation in that state. I presented two alternative strategies to satisfy the requirement that noun phrases be full KPs. In Chapter 4, I suggested that noun phrases that are not full KPs can undergo adjunction to a non-nominal element, rendering them part of another extended projection and invisible to (2). In Chapter 5, I suggested that K^0 can be inserted late in the derivation, forming a full KP where one did not already exist, and satisfying (2).

Despite the existence of a Case Filter, the present proposal cannot limit the distribution of KPs by means of Case. Much of the explanatory power of the common Case Filter is lost. While [μ Case] can determine the form of KPs, requirements on its valuation cannot determine licit positions. Nominals need not be in

a configuration to value [*u*Case] to be well-formed. Though if they are in a position to value [lit *u*Case], they must. This characteristic is shared with previous analyses that place the locus of case-assignment in the post-syntax (e.g. Marantz 1991/2000, McFadden 2004, Bobaljik 2008, Sigurðsson 2009) and those that assume that (at least in some languages) case-assignment arises ‘for free’ within the narrow syntax (e.g. Preminger 2011, 2014; Levin & Preminger 2015; Baker 2015). The distribution of nominals can only be attributed to independent conditions on External Merge and on Internal Merge, both of which have been subsumed under Case Theory in previous approaches. Adopting this position forces the reanalysis of all those environments in which Case was held to be the explanation for the distribution of nominals. In every instance, there must be another factor responsible for explaining well-formed and ill-formed constructions.

In this chapter, I describe the form of the grammar that does not employ the common Case Filter to determine the distribution of full KPs. This is accomplished chiefly by examining a number of the most well-known applications of the Case Filter. I discuss how the phenomena in question are captured by the Case Filter, and how they can be captured alternatively. As noted at the outset, much research has demonstrated empirical inadequacies with many Case-theoretic proposals, and, for the most part, the arguments presented here are taken from the literature. Although, some novel arguments are provided, as well.

7.1 External Merge

External Merge, or how elements enter the derivation, constitutes one of the broad categories of phenomena that have received Case-theoretic explanations. Various proposals have suggested that the locations in which (certain) full noun phrases, i.e. KPs, can enter the derivation can, in part, be reduced to conditions on Case assignment, in the traditional sense. Certain positions are licit base-positions for KPs, because they will be able to receive Case. Other positions are illicit, because nominals generated in these positions will be unable to receive Case. Case-theoretic explanations have been offered to capture licit positions for External Merge of PRO, the form of complements to adjectives and nouns (*of*-insertion), and even for the External Merge of all KPs, more generally.

I explore these phenomena here, showing that Case cannot be used to restrict the base-position of full KPs. Instead, I suggest that an independent property of the grammar – (c)-selectional requirements – are responsible for encoding where KPs can enter the derivation and where they cannot. Certain syntactic heads are specified with information regarding licit elements (syntactic categories) that they can and/or must combine with. For instance, it is well-known that semantically related predicates display idiosyncratic properties related to the kinds of complements they may take. The verbs *eat* and *devour* both describe similar activities. However, the former is optionally transitive – *John ate (the whole pizza)* – while the latter is not – *John devoured *(the whole pizza)*. C(ategorial)-selection, or subcategorization, provides information about the kinds of arguments that an element can and must take. As a syntactic category, KPs are one such element whose distribution can be encoded by (c)-selectional requirements. I remain somewhat agnostic as to how c-selectional requirements should be enforced. As noted in Chapter 4, there are (at least) two ways to think

about how c-selectional requirements can be encoded (Adger & Svenonius 2011). (i) There is little or no independently specified c-selectional requirements; well-formed complementation is determined by non-syntactic factors (see Borer 2005 for such a view). What a verb like *confide* means determines (in part) the lexical categories it can take as complements. (ii) C-selection can be subsumed under feature-valuation (e.g. Chomsky 1965, Svenonius 1994, Emonds 2000, Holmberg 2000, Julien 2000, Matushansky 2006, Adger & Svenonius 2011) On a featural approach, c-selectional features must be subject to a locality constraint, because c-selection is always local (Baltin 1989).¹

In the remainder of this section, I discuss why c-selection should be preserved as an independent mechanism of the grammar, how to model the distribution of PRO and overt infinitival subjects, and how to capture *of*-insertion without appealing to classic Case-theoretic explanations.

7.1.1 C-selection

As noted above, semantically related predicates display idiosyncratic properties related to the kinds of complements they may take. The verbs *drink* and *chug* both describe similar activities, consuming liquids. However, the former is optionally transitive – *John drank (that whole bottle of gin)* – while the latter is not – *John chugged *(that whole bottle of gin)*. C(ategorial)-selection, or subcategorization, provides information about the kinds of arguments that an element can and must take. Similarly, verbs of asking, like *ask* and *inquire*, readily take clausal complements (3), but display more variability with respect to nominal complements – so-called ‘concealed questions’ (4).

(3) ***Verbs of asking take sentential complements***

- a. I asked what the time was.
- b. I wondered what the time was.

(4) ***Not all verbs of asking take nominal complements***

- a. I asked the time.
- b. *I wondered the time.

Similar effects are observed amongst verbs that take propositional complements like *believe* and *complain*. Only the former permits nominal complements in addition to sentential complements. Grimshaw (1979, 1981) argues that this information is encoded by an independent mechanism of the grammar – c-selectional requirements. However, it has alternatively been held that the independent mechanism of c-selection may be removed from the grammar, and its effects be reduced to Case (Pesetsky 1982, 1992; Chomsky 1986a; Chomsky & Lasnik 1995). A Case-theoretic approach to c-selection attributes the inability of verbs like *inquire* to take nominal complements to their inability to assign accusative Case. As such, (4b) is ungrammatical, because the Case Filter is violated. Sentential complements are tolerated regardless of the

¹ See Svenonius (1994), Adger (2003) and Hallmann (2004) for three such approaches.

Case specification of a verb (3), because they do not require Case.

One advantage of this proposal is the ability to capture an (apparent) gap in the possible mapping of c-selectional to s(ematic)-selectional requirements. Specifically, Grimshaw (1979, 1981) observes that there are no predicates in English that s-select a question or exclamation, and only c-select a nominal. For Grimshaw, c-selectional requirements determine whether a predicate that s-selects for a question, proposition, or exclamation can take a nominal complement. They have nothing to say about its ability to take a clausal complement. As such, subcategorization has nothing to say about the typological gap. The availability of Case on the other hand does. An predicate that s-selects a question, proposition, or exclamation can always take a clausal complement, because no further restrictions are placed on these complements. On the other hand, the distribution of nominal complements is further restricted by the presence/absence of Case. Notice that even on a theory of this kind, syntactic properties of complements cannot be completely ignored. For instance, many predicates that take prepositional complements restrict the form of the preposition that heads to complement. *Depend* and *rely* require *on*, *hope* requires *for*, etc. Pesetsky suggests that these requirements are encoded via l(exical)-selection.²

If we are to maintain the proposed Case Filter, c-selection cannot be reduced to Case Theory. I have argued that [*u*Case] can survive the derivation. Therefore, c-selection should not be able to be reduced to environments in which [*u*Case] is valued. A number of independent arguments have been put forward in the literature arguing that c-selection cannot be reduced to Case-theoretic requirements alone (e.g. Pollard & Sag 1987, 1989; Rothstein 1992; Webelhuth 1992; Svenonius 1994; Odijk 1997; Nathan 2006). Some of these arguments involve different facts than the ones discussed by Pesetsky (e.g. Pollard & Sag 1987, Webelhuth 1992). As such, it is possible that Pesetsky's analysis of the facts presented above is correct, though the more general claim that c-selection can be reduced to properties of s-selection and properties of syntactic Case is false. I present the arguments of Rothstein (1992), Svenonius (1994) and Odijk (1997) here as they demonstrate that even Pesetsky's analysis of the facts he employs cannot be maintained.

Rothstein (1992) observes a number of difficulties in extending Case theory to c-selection. First, she observes that predicates held to not take nominal complements can, in fact, do so, if those complements undergo *wh*-movement (5).

(5) ***Wh-movement ameliorates banned nominal complements*** (Rothstein 1992)

- a. *We hoped *a good result*.
- b. *What* John hopes *t* is that this will not happen again.
- c. *They claimed the ungrammaticality of the construction.
- d. *What* they claim *t* is that it was an accident.

² The requirement that l-selection be retained already calls into question the benefit of reducing c-selection to Case. Argument taking elements must idiosyncratically indicate their ability to assign Case and their l-selectioal requirements. It is reasonable to wonder if this state of affairs is superior to one in which predicates idiosyncratically specify c-selectional properties of *the head* of their complement.

As example (5b) and (5d) appear to illustrate, there is nothing wrong with verbs like *hope* and *claim* taking nominal complements. What is problematic is leaving these argument in complement position. Though there might be restrictions on the types of *wh*-words that are licit in these positions. Furthermore, if verbs are specified as not assigning accusative case to rule out certain nominal complements. It is not clear why other nominal complements are permitted. Rothstein (1992) observes that the verb *complain* cannot take certain nominal complements (6a), but can take ‘false reflexives’ (6b). Similarly, *reason* disallows a nominal complement (6c), unless it is of the form *X’s way* (6d).³

(6) ***Nominal complement variability*** (Rothstein 1992)

- a. *He complained *their leaving*.
- b. He complained *himself* hoarse about the bad coffee.
- c. *She reasoned *the answer*.
- d. She reasoned *her way* out of the crisis.

It would then appear that the possibility of taking a nominal complement cannot be predicted on the basis of Case-assigning properties alone. C-selectional specifications must be encoded independently of Case-assignment. An immediate advantage of separating c-selection from Case assignment is predicting the possibility of heads which c-select nominals without Case-licensing them. This appears to be the case for nouns and adjectives that can take nominal complements, but must license them via *of*-insertion (Chomsky 1981). *Of*-insertion is not always possible (e.g. *undecided* and *clear* do not permit it). This state of affairs can only be explained by allowing only some nouns and adjectives to be able to c-select nominal complements.

Furthermore, reducing c-selection to s-selection predicts that NP-complements should be licensed in environments in which they are not (Odijk 1997). Raising predicates, such as *seem*, *appear*, and *turn out* as in (7), pose a problem for Case-theoretic analyses. The predicates take a complement of the semantic type proposition.

(7) ***Raising predicates***

- a. It seems/appears (to me) that he is dead.
- b. It turned out that he is dead.

Seem-type verbs then should be able to take a nominal complement instead of a CP, so long as this nominal can receive Case. Given Burzio’s Generalization, we can assume that these verbs do assign Case; they assign no θ -role to the subject position, and, in fact, these verbs do not allow NPs as complement – **It seem/appears this (to me)*; **It turned out this*. However, if the verb does not assign Case and the subject position is not assigned a θ -role, it should be the case that a nominal complement could moved to subject position, and receive Case there. Pesetsky’s analysis predicts that such ungrammatical sentences, e.g. **This*

³ See Marantz (1984) for a discussion of these constructions.

seems/appears (to me), will be well-formed. There is a Case-assigner for the nominal and it is s-selected by the verb. If c-selection is retained, however, the facts can be accounted for very simply; verbs of the *seem*-class s-select propositions and c-select CPs/TPs but not NPs.

Another shortcoming of Pesetsky's analysis is that the apparent gap in possible complements that is used to motivate abandoning c-selection is, in fact, not real. There are predicates that s-select for a proposition that can only express that proposition as a nominal complement (Grimshaw 1981, Svenonius 1994).

(8) **'Express' disallows CP complements**

- a. This proposal expresses the observation that no even numbers are prime.
- b. *This proposal expresses that no even numbers are prime.

Both the nominal complement and clausal complement express a proposition; a predicate that s-selects one, s-selects the other. Clearly, Case is available in object position (8a). Therefore, an analysis that relies solely on the basis of s-selection and Case for identifying well-formed nominal complements should permit (8b). The Case-assigning properties of *express* should be irrelevant for hosting clausal complements. The ungrammaticality of the clausal complement is unclear. However, it can be accounted for if verbs like *express* c-select nominal complements and not clausal complements.

The data presented above strongly suggest that c-selection must be retained as an independent mechanism in the grammar that serves to (help) determine the distribution of nominals. Case is not responsible for determining licit base-positions of lexical KPs / *pro*. Nominals enter the derivation when another element's c-selectional features dictate it, and cannot enter the derivation when such features are not present. Adopting independent c-selectional constraints on the external merge of KPs ensures that KPs cannot be overgenerated. Even though KPs need not value [*uCase*] during the course of the derivation, we do not expect to be able to insert additional nominals into the derivation freely. Their presence is dictated by c-selection. Note that such requirements should apply equally to overt KPs and unpronounced KPs, i.e. *pro*, constraining the distribution of both equally. Early versions of the common Case Filter, limited to phonologically realized nominals, were not able to capture this observation (e.g. Chomsky 1981, 1986; Shlonsky 1987, Baker 1991; Phillips 1993).

7.1.2 Infinitival subjects

Case has also been implicated in determining the distribution of subject KPs in non-finite clauses (Chomsky 1980, Bouchard 1984). In general, the subject of an infinitive must not be an overt NP (9a,b), but this restriction does not apply when the infinitival clause is the complement of a particular class of matrix predicates – so-called *Exceptional Case Marking* (ECM) predicates, including *believe* (9c), or when the infinitival clause contains the prepositional complement *for* (9d,e). Where an overt lexical NP subject is prohibited, the subject of the infinitive is assumed to be the subject pronominal element PRO.

- (9) *The distribution of infinitival subjects*
- a. James decided [(**Mary/himself*) to leave].
 - b. **James to leave* would be great.
 - c. James believed [Mary to have left].
 - d. James decided [for Mary to leave].
 - e. For James to leave would be great.

Given the common Case Filter, the distribution of overt infinitival subjects in (9) can be attributed to Case. If subject positions of non-finite clauses are not Case positions, the absence of Case assignment rules applying to non-finite subjects excludes lexical NPs from this position. Overt infinitival subjects are only possible when they are in a Case-position. This proposition is straightforward for infinitival subjects following *for*, as in (9d, e), so long as complementizer *for* assigns case. The availability of an overt infinitival subject in clausal complements to verbs like *believe*, however, requires a bit more explanation. The Case Filter helps capture the contrast between the *believe*-class and the *decide*-class of verbs, if *believe* and related predicates permit Case assignment across a non-finite clause boundary, while *decide*, and related predicates, does not. One means of encoding this difference has been to propose that *decide* and *believe*-type predicates vary on the size of their clausal complement. *Decide* takes a CP-complement, while *believe* takes an TP-complement (e.g. Chomsky 1981, Chomsky & Lasnik 1995).⁴ To reiterate an observation from Chapter 1, various diagnostics support the view that the subject of the complement of *believe* receives Case as if it were the object of the matrix predicate. For example, accusative case is unavailable in this position when the matrix predicate is passivized (*Mary was believed to have left*). Unlike the subject of other non-finite complements, subjects of complements of *believe*-type predicates appear to be Case-licensed by the matrix predicate, satisfying the Case Filter.

Attributing the distribution of overt nominals to the Case Filter provides a cross-linguistically motivated constraint, even in languages without overt case morphology. However, it is untenable under the current framework. [*u*Case] need not be valued, as such Case Filter violations will not arise if the nominal is generated in a Caseless position. The distribution of non-finite subjects is not an environment which rules out the present treatment of Case. Independent observations demonstrate that Case does not condition the distribution of non-finite subjects (e.g. Andrews 1971, 1976; Comorovski 1985; Sigurðsson 1991; Carnie & Harley 1997; Schütze 1997; Babby 1998; Babby & Franks 1998; Franks 1998; Hornstein 1999 *et seq.*; Landau 1999 *et seq.*; Harley 2000; McFadden 2004; San Martin 2004; Szabolcsi 2006, 2009a,b).

⁴ This distinction is crucial for the matrix predicate to be able to assign case to the embedded subject. Postal (1974) argues that case assignment to infinitival subjects of the complement of ECM predicates involves raising of the embedded subject into the matrix clause, where embedded subjects receive Case just as direct objects do. Such raising is facilitated by the reduced architecture of the TP-complement. Chomsky (1973, 1981, 1986) argues against the raising account, but nevertheless, maintains a CP/TP distinction; only an TP-complement permits case-assignment from the matrix verb to the embedded subject.

7.1.2.1 Licensing PRO

Standard Case theory, then, relies on the idea that the finiteness of a clause simultaneously determines and explains the choice between overt KPs / *pro* and PRO. Finiteness and non-PRO subjects are not simply correlated. Finiteness is what licenses overt subjects. In terms of Case assignment by T^0 , there can only be two possibilities. Finite T^0 that licenses non-PRO subjects and non-finite T^0 that licenses PRO subjects. However, a number of alternative accounts reject this relationship between finiteness and argument-licensing (e.g. Landau 2004 *et seq.*; Sundaresan & McFadden 2009, 2010). Other proposals reject the existence of PRO altogether, rendering any discussion about its distribution compared to overt KPs moot (e.g. Hornstein 1999 *et seq.*). Here, I briefly present one account of the distribution of PRO, assuming for now that PRO is real, to demonstrate how its distribution can be dissociated from T^0 's ability to assign Case.

Landau (2004) holds that the local environment of the embedded subject must provide all the necessary information to determine whether it must, can or cannot be PRO. He assumes that the relevant features of this environment are [T] and [Agr]. T^0 positively specified for both features, i.e. [+T,+Agr], will necessarily license a lexical subject. T^0 with any negative specification – in [T], [Agr], or both – will necessarily license PRO. On this view, PRO is the elsewhere case of lexical subjects.

If it is an embedded clause's [T] and [Agr] specifications that determine its ability to license overt subject and/or PRO, there must be some means whereby the clausal features [T] and [Agr] and the referential features of the subject that they license interact with each other. Landau exploits the independently motivated referential distinction between PRO and lexical DPs (including *pro*) to achieve this goal, encoding the distinction in the (interpretable) feature [R]. Lexical DPs are [+R]. PRO is [-R]. [-R] requires an antecedent to determine its meaning. PRO is unvalued for [person], as well as for [number] and [gender] features. It contains slots for each ϕ -feature (including Case), and these slots are valued via the establishment of an Agree-relationship with the functional head that licenses the controller.

Clausal features can now be modeled as to ensure the presence/absence of PRO in terms of an uninterpretable counterpart of [R], present on functional heads like T^0 and C^0 . Landau holds that whenever T^0 or C^0 are specified for [+T,+Agr], they automatically come to bear [+R]. Other combinations of [T] and [Agr] are associated with [-R]. Additionally, a complete lack of [T] or [Agr] ensures no [R] value is assigned. Licensing of the subject can, on this model, be understood as checking off whatever uninterpretable feature(s) T^0 and C^0 bear. Since lexical DPs are specified with an interpretable [+R], they will be required to check off the uninterpretable [+R] found on T^0 and C^0 specified for [+T,+Agr]. Given that PRO bears interpretable [-R], it will be obligatory if T^0 or C^0 is negatively specified for [Agr] and/or [T].

Landau's (2004) calculus of control provides a means for capturing the distribution of lexical/*pro* infinitival subjects and PRO without appealing to Case. Though see Landau (2014) for a critique of this approach, which retains much of the empirical motivation, but discards the theoretical machinery used to implement it. In addition to its conceptual benefits, especially in the theory of Case, employed here, we can see that there are empirical benefits to dissociating the distribution of infinitival subjects from Case.

7.1.2.2 Quirky case

A Case-theoretic account of infinitival subject distribution faces problems with respect to Icelandic quirky case (e.g. Zaenen et al. 1985). In Icelandic, as in English, the subject of an infinitive must not be an overt nominal, except when the infinitive is the complement of an ECM verb, such as *telja* ‘believe’. However, this distribution cross-cuts case distinctions. A quirky subject shows exactly the same alternation between overt and covert nominals as canonical subjects (10). However, the quirky subject does not depend on the verb ‘believe’ (which assigns accusative) for its (overt) case. In (10b), dative case on the infinitival subject is assigned by the verb ‘help’.

(10) *Overt infinitival subjects cross-cut case availability* (Zaenen et al. 1985).

- a. Ég vonast til [að PRO verða hjálpað]
I.NOM hope for PRO be helped
‘I hoped to be helped.’
- b. Ég tel þeim hafa verið hjálpað i prófinu
I.NOM believe them.DAT to.have been helped in exam.the
‘I believe them to have been helped on the exam.’

If the availability of case morphology alone determined the distribution of overt infinitival subject, we would predict that quirky case subjects should have a wider distribution as infinitival subjects than their non-quirky counterparts. If Case is relevant, at all, in determining the distribution of nominals, it cannot be equated with morphological case. Zaenen et al. (1985) take data like (10) to suggest that the common Case Filter should be abandoned (a similar proposal is made by Marantz 1991/2000 *i.a.*).

However, the data in (10), much like Icelandic quirky case A-movement facts, have been taken to indicate the reality of abstract Case (e.g. Cowper 1988, Freidin & Sprouse 1991). This conclusion proves untenable when further data concerning ϕ -agreement is considered (cf. Bobaljik 2008). As discussed in Chapter 6, Icelandic agreement targets nominative-marked arguments regardless of thematic role. If ϕ -agreement were sensitive to abstract Case it is not clear why an abstract nominative, but quirky case subject could not control agreement. Two systems of agreement are required in addition to two systems of C/case. As Bobaljik notes, the redundancy can be avoided by adopting one systems of case assignment, and one system of ϕ -agreement that is case-sensitive. PRO then appears to be able to be generated in positions that can be assigned case, contrary to the predictions of a Case-theoretic account of its distribution.

7.1.2.3 PRO bears canonical case

Recall from Chapter 1, that some of the clearest evidence that the distribution of PRO is not conditioned by Case theory comes from observations that PRO bears standard case (Landau 2006). To reiterate, such arguments rely on the phenomenon of case concord. Predicates, emphatic pronouns, reflexives, floating quantifiers and classifiers inflect for case, in a number of languages. The morphological case they display matches the case of the DP with which they are associated. When such items are subject-oriented they indicate the case of PRO. It is clear to see that PRO is marked with its own Case, assigned directly to it, because that case can be distinct from the case of the controller, which determines its reference. These instances make it impossible to explain the phenomenon as case transmission from controller to PRO (Landau 2006).

(11) Case concord reveals the case of PRO

- a. *Icelandic* (Sigurðsson 1991)

Strákarnir vonast til [að PRO vanta ekki **alla** í skólann]
the.boys.NOM hope for PRO.ACC to.lack not **all.ACC** in the.school
'The boys hope not to be all absent from school.'

- b. *Hungarian* (Tóth 2000)

Illentenség volt Mari-**tól** [PRO ilyen türelmetlen-**nek** lennie]
impoliteness was M.-ABL PRO.DAT so impatient-DAT to.be.3S
'I was impolite of Mary to be so impatient.'

- c. *Greek* (Philippaki-Warbuton & Catsimali 1999)

Anangasan tin **Eleni** [PRO na milisi afti **i idhja**]
forced.3P the E.ACC PRO.NOM PRT speak.3S she herself.NOM
'They forced Helen to speak herself.'

As case concord on the floated quantifier (11a), predicative adjective (11b), and reflexive (11c) reveal, PRO bears case that need not match that of the controller, suggesting it receives standard case independently. Similar observations have also been made for Russian (Franks & Hornstein 1992), German (Wurmbrand 2004), Korean (Madigan 2005), and Romanian (Comorovski 1985).

The data also rule out a *Null Case* account of the distribution of PRO (e.g. Chomsky & Lasnik 1995; Bošković 1996, 1997; Martin 1996, 2001). The behavior of PRO in raising constructions provides an argument that PRO must move, just like overt noun phrases. A PRO subject cannot be co-referent with a pronominal experiencer argument in a raising constructions (12a), but must be co-referent with a reflexive experiencer (12b).

(12) PRO must move (Chomsky & Lasnik 1995)

- a. [PRO_i to seem to him_{*i} t_i to have written the letter] would be strange.
b. [PRO_i to seem to himself_i t_i to have written the letter] would be strange.

The Binding Condition effects attested in (12) require PRO to move from its base-position as the subject of the infinitival complement of *seem* to a position above the pronoun/reflexive. In (12a), the derived c-command relationship triggers a Condition B violation, ruling out possible co-reference. In (12b), the derived c-command relationship triggers a Condition A environment, permitting the attested co-reference. Chomsky & Lasnik (1993) propose then that PRO does need Case, but a special kind of Case – Null Case – that can only be assigned to PRO and by appropriate instances of infinitival T⁰. See Landau (2000), Baltin & Barrett (2002), Hornstein (2003), Cecchetto & Oniga (2004) and Wurmbrand (2005) for challenges to the Null Case approach. The *ad hoc* nature of this proposal has been taken to motivate work that reanalyzes control constructions, much like Landau's (2004) outlined above. Some have suggested that control is a movement operation and that PRO is better analyzed as a trace of unpronounced copy of the Controller (e.g. Bowers 1973/1981; Wehrli 1981; Hornstein 1999 *et seq.*). Data like that in (11) is also claimed to be equally damaging to movement theories of control (e.g. Landau 2006, Bobaljik & Landau 2009), though see Boeckx et al. (2010) for a rebuttal.

The facts about the distribution of subject noun phrases in infinitival subject constructions support the idea that control infinitives have PRO due to aspects of their C⁰ and T⁰ heads, not because control verbs fail to assign Case or because PRO is unable to bear it (Sigurðsson 1991, Chomsky & Lasnik 1995, Marantz 1991/2000, Landau 2004 *et seq.*). I have presented one alternative theory of control above. Crucially on that theory PRO, like any KP, can bear a [*u*Case] feature that could be independently valued. The ability to license PRO has nothing to do with Case, but rather certain featural combinations in the embedded clause. Despite initial success, the Case Filter is incapable of capturing the distribution of infinitival subjects. Control is another environment in which Case does not play a role in determining the distribution of KPs. PRO like any other KP can bear Case.

7.1.2.4 The distribution of 'for'

Before concluding, I return to discuss the prepositional complementizer *for*. I contend that much like the distribution of PRO is not reducible to Case theory, the presence/absence of the complementizer *for* should not be attributed to Case theory.

Noting a number of common properties shared by *for* and the complementizer *that*, I maintain that *for* is a complementizer which *does not* have unique Case-licensing properties. The distributional properties of *for* show striking parallels to those of the complementizer *that* (Pesetsky & Torrego 2001, McFadden 2004). This is one of the strongest arguments in favor of analyzing *for* as a C⁰, providing insight into the constraints on its overt appearance. Consider the data below:

(13) *Complementizer optionality*

- a. I would like (for) him to buy the truck.
- b. I believe (that) he bought the truck.

- (14) ***Obligatoriness in CP subjects***
- a. [**(For)* him to buy the truck] would be preferable.
 - b. [**(That)* he bought the truck] was unexpected.
- (15) ***C⁰-trace effects***
- a. Who_{*i*} do you think (**that*) *t_i* bought the truck?
 - b. What_{*i*} do you think (*that*) he bought *t_i*?
 - c. Who_{*i*} would you like (**for*) *t_i* to buy the truck?
 - d. What_{*i*} would you like (*for*) him to buy *t_i*?

Just like the complementizer *that, for* displays optionality when heading CP complements, but not CP subjects, and displays complementizer-trace effects. These shared properties suggest strongly that the two are C⁰s. What remains to be determined is if *for* should be analyzed as a special Case-assigning C⁰.

Examples like (16a) have been taken as evidence that lexical DPs must be assigned Case. Given that the infinitival T⁰ is unable to assign Case, the complementizer *for* is obligatory.

- (16) ***(Non)-optionality of English complementizers***
- a. I would like very much *(*for*) John to buy the truck.
 - b. Who would you like very much *(*for*) to buy the truck?
 - c. I thought yesterday *(*that*) John should buy the truck.

It is quite likely, though, that the obligatory presence of *for* in (16) is not related to Case (e.g. McFadden 2004, Landau 2006). If it were, it would be difficult to explain how *who* gets Case in (16b), where *for* is absent. Rather, the ungrammaticality of (16a) can be attributed to a general ban on complementizer drop whenever the complement clause is separated from the matrix verb by an adverb (e.g. Landau 2006). This behavior is shared by finite and nonfinite complementizers alike, as illustrated by (16c).⁵ The overt distribution of *that* in (16c) cannot be explained in terms of Case, because that complementizer does not play a role in the licensing of subjects. If we conclude that the distribution of *for* should be collapsed, at least in part, with that of *that*, there is reason to abandon a Case-based account.

Support for the view that obligatoriness of *for* in (16a) is triggered by the presence of an adverb comes from differences in behavior between *want*- and *believe*-class verbs. *Want*-class verbs display optionality in the realization of *for* (17) (e.g. Postal 1974, Lasnik & Saito 1991, Bošković 1997, Martin, 2001).

⁵ Some speakers note that (16c) is acceptable without the complementizer. Similarly, David Pesetsky (p.c.) observes that omission of *that* in *I told Mary (that) John should buy the book* is acceptable. Whereas, omission of *for* in *I asked Mary *(for) John to buy the book* is ungrammatical.

(17) ***‘Want’-class verbs display optional ‘for’***

- a. John would like Frank to bring the soda.
- b. John would like for Frank to bring the soda.

As noted above, the Case-theoretic account of these patterns relies on a model that permits *want*-class verbs to (optionally) assign Case to the subjects of their complements. In such cases, an adverb cannot intervene between a verb and its object, (18a). In this regard, *want*-class verbs pattern like ECM predicates like *believe* which also display an adjacency requirement with the embedded subject.

(18) ***Embedded subjects and Case adjacency***

- a. John would like (*desperately) Frank to bring the soda.
- b. John believes (*whole-heartedly) Frank to be a thief.

There is an adjacency requirement between verbs and accusative-marked KPs in English (Stowell 1981), so when the matrix verb and the embedded subject are rendered non-adjacent by an intervening adverb, ungrammaticality arises.

However, this similarity cannot be maintained. It is commonly agreed that the *want*- and *believe*-classes behave differently in other respects (see McFadden 2004 and sources therein). Further evidence suggests that the embedded subject establishes a close relationship with the matrix clause with *believe*-class verbs, but this does not happen with the *want*-class.⁶ First, if the matrix verb is passivized, the embedded subject can raise to matrix subject position with *believe*, but not with *want*.

(19) ***Passivization with ‘believe’ and ‘want’***

- a. John_i was believed/proven/made out t_i to be a thief.
- b. *John_i was wanted/preferred/liked t_i to be a thief.

Second, subjects embedded under *believe*-class verbs can, at least for some speakers, scope over matrix elements. Those embedded under *want* cannot.

(20) ***Matrix scope with ‘believe’ and ‘want’***

- a. ?Joan wants him_i to be successful even more desperately than Bill’s_i mother does.
- b. ?*Joan believes him_i to be a genius even more desperately than Bill’s_i mother does.

Given their close relationship with the matrix clause, it is plausible to think that the subjects embedded below *believe*-class verbs are licensed by those verbs. Establishing the same relationship for embedded subject under *want*-class verbs seems untenable. The ungrammaticality of (38a) is then not attributable to Case Adjacency, which as argued by Johnson (1991) and Koizumi (1995) may have nothing to do with Case,

⁶ These differences may be captured if *want*-class verbs have additional unpronounced structure (e.g. Den Dikken et al. 1996).

but rather the general ban on complementizer drop whenever the complement clause is separated from the matrix verb by an adverb. Note that the sentence becomes grammatical when *for* is added.

Furthermore, complementizer drop is a highly idiosyncratic phenomenon. Certain predicates simply do not allow it (Landau 2006).

(21) ***Complementizers can't always drop*** (Landau 2006)

- a. It is illegal *(for) tourists to park here.
- b. It is outrageous *(that) tourists park here.

While example (21a) is commonly taken to reflect a Case assignment relationship between *for* and *tourists*, (21b) is not taken to reflect the same relationship between *that* and *tourists*. Given that lexical statements (dis)allowing complementizer drop are needed anyway (e.g., *want (for)* v. *long *(for)*), nothing seems to be added by associating obligatory complementizers with the capacity of licensing abstract Case on the embedded subject.

The data in this subsection suggests that *for* and *that* should be analyzed as two instances of C^0 . *For* introduces non-finite clauses, *that* introduced finite clauses. The ungrammaticality of non-finite complements not introduced by *for* has nothing to do with Case. Rather, it has to do with violating conditions on the omission of *for*.⁷ In general, deletion of a complementizer when no movement takes place out of it is an idiosyncratic process, as demonstrated by (21). In instances of movement and/or PRO subjects, I follow McFadden (2004) in attributing the deletion of *for* to a generalized COMP-empty category effect. Complementizers must be deleted in the presence of phonologically null subjects, whether those subjects be unpronounced copies of moved elements or unpronounced elements like PRO.^{8,9}

Lastly, suppose that certain clausal complements are bare TPs, so the question of dropping the complementizer does not arise for them, e.g. **It is likely John to win*. Here we can maintain that assume embedded subjects are unavailable, because expletive *it* cannot associate with TP complements (Bošković 1997, McFadden 2004). Just like expletive *there* can only associate with KPs, a constraint on expletive *it* only associating with CPs can capture its distribution.

⁷ A common approach to model these facts within GB was to hold that the distribution of overt and non-overt forms of *that* should be captured by the ECP (e.g. Stowell, 1981, Rizzi, 1990). (Recall the Japanese Comp-drop data from Chapter 2.) This position forced the complementizer to be overt in cases where it was not properly governed, as in CP subject contexts, and it forced the complementizer not to appear in cases where it would block the proper government of an empty category in the subject position, as in the *that*-trace effect. However, see Bošković & Lasnik (2003) for a discussion of some problems with the ECP account.

⁸ Adopting a movement theory of control (e.g. Hornstein 1999 *et seq.*) permits a unification of the empty categories in question. PRO, on this view, is simply another instances of an unpronounced copy in a movement chain.

⁹ McFadden notes that there is some evidence that the connection is real. In the Belfast English dialect described by Henry (1992), the sentences in (i) are grammatical. Note that all are ungrammatical in standard English, where *for* is not allowed in non-finite clauses that lack an overt subject.

The discussion here has demonstrated that the distribution of PRO and lexical/*pro* subjects in nonfinite clauses can be dissociated from Case. PRO, like all other KPs, bears [*u*Case]. This was confirmed empirically by showing that case concord phenomena reflect the case borne by PRO. Following Landau (2004), I suggested that specific featural combinations in the embedded clause are responsible in determining where the two classes of subjects can appear. Though alternative approaches along these lines suggested more recently, (e.g. Landau 2014), or removing PRO from the grammar entirely (e.g. Hornstein 1999 *et seq.*) may also be viable. Any link between the presence/absence of *for* and non-finite subjects is not attributable to Case-licensing, but independent conditions on deletion of complementizers.

7.1.3 *Of*-insertion

As noted above, an advantage of separating c-selection from Case assignment is predicting the possibility of heads which c-select nominals without Case-licensing them. For instance, adjectives and nouns, unlike verbs and prepositions, cannot license nominal complements even when such complements conform to subcategorization and semantic requirements. Such complements must be introduced by *of* (22).

(22) *Nominal and adjective complements require ‘of’*

- a. prove (***of**) the theorem
 - b. the proof ***(of)** the theorem
 - c. resent (***of**) Harry
 - d. resentful ***(of)** Harry
-

(i) *Belfast English tolerates ‘for’-PRO sequences* (Henry 1992)

- a. I went to the shop for to get bread.
- b. For to stay here would be just as expensive.
- c. I tried for to get them.

Simultaneously, Belfast English also lacks the *for*-trace effect.

(ii) *Belfast English tolerates ‘for’-trace sequences* (Henry 1992)

Who do you want for to go?

As McFadden observes, Belfast English appears to lack a *for*-EC effect entirely. Though the locus of *for* may also be at issue (David Pesetsky p.c.). Belfast English does however have a *that*-trace effect (iii) (Henry 1995, Pesetsky & Torrego 2001), complicating a uniform treatment of the complementizers *for* and *that*.

(iii) *Belfast English ‘that’-trace effect* (Pesetsky & Torrego 2001)

- a. *Who_{*i*} did John say [did *t_i* go to school]?
- b. *Who_{*i*} do you think [that *t_i* left]?

Now, recall that a Case-based account for the COMP-trace effect is implausible, since a *wh*-trace should have the same Case-licensing needs as an overt KP. The data in (ii) and (iii) provide another reason to abandon explaining the distribution of *for* in terms of the need to license embedded subjects. It is better taken as the variable Spell-Out of the C⁰ that introduces certain nonfinite clauses, subject to more general constraints on null and overt realization.

Since *prove* and *resent* have the ability to take a nominal complement, we would expect that *proof* and *resentful* should also be able to take a nominal complement. This is never the case. To account for this paradigmatic gap, Chomsky (1970) proposes an obligatory rule, *of*-insertion, that inserts *of* between a noun or adjective and its nominal complement.

One of the most common means of understanding the requirement of *of*-insertion is to reduce it to a requirement of Case (Stowell 1981; Chomsky 1980, 1981). Such accounts hold that since *of* is a preposition, it can function as a "dummy" Case-licensor, allowing the NP to which it is adjoined to satisfy the Case Filter. Of course, the need to rescue a KP bearing [*u*Case] cannot be retained under the present model of Case assignment and treatment of the Case Filter. The phenomenon of *of*-insertion must be re-analyzed. It is not triggered to Case-license nominals that would otherwise trigger a common Case Filter violation.

7.1.3.1 Limits on '*of*'-insertion

Chomsky (1986) offers initial objections to the common treatment of *of*-insertion. He observes that inserting *of* cannot be freely used to satisfy potential Case Filter violating constructions. For instance, constructions which require A-movement – passive, unaccusative, and raising constructions – *of*-insertion cannot be used in place of A-movement. This is illustrated by the ungrammaticality in (23).

(23) **'*Of*'-insertion does not bleed A-movement**

- a. *There / it was killed (of) John.
- b. *There / it broke (of) the lamp.
- c. *There / it seemed (of) John to be happy.

If A-movement is driven by the needs of nominals to receive Case, a plausible alternative would be to satisfy their Case requirement by way of *of*-insertion and subsequently satisfy the EPP by placing an expletive in subject position. Regardless of the form of expletive, this possibility is unattested. The ungrammaticality of the examples in (23) suggest that *of*-insertion must be constrained. Chomsky (1986) suggests to constrain it by treating *of* as the realization of (inherent) Case, rendering adjectives and nouns case assigners just like verbs and prepositions. On this view, *of*-insertion is required in (22) not because of a Case Filter violation, but because morphology must be pronounced. Gratuitous non-pronunciation of morphology is not tolerated.¹⁰

¹⁰ Recall that Rothstein (1992) notes that c-selection permits merger of a complement to a category which could never assign Case. Nouns and adjectives can take arguments without assigning them Case. This is unexpected if c-selection is reduced to Case. No noun or adjective should ever take a complement. Treating *of* as the realization of Case within the nominal and adjectival domains invalidates this argument. Nouns and adjectives can assign Case. Thus, those that can should be able to take complements. Nevertheless, the other objections to reducing c-selection to Case hold.

7.1.3.2 ‘Of’ is unlike other prepositions

Branan (in prep.) observes a number of other behaviors in which *of* can be distinguished from canonical prepositions. I repeat them here. First observe that extraction from its complement (24b) or ‘potential complement’ (25b) is significantly improved when compared to extraction from the complements of other prepositions, like *about*.

(24) ***P⁰-trace effects are weaker from ‘of’-insertion contexts***

- a. *[How many strings]_i were you sure about *t_i* having been pulled to get Bill that job?
- b. ?[How many strings]_i were you sure of *t_i* having been pulled to get Bill that job?

(25) ***A-trace effects are weaker from potential of-insertion contexts***

- a. *Who_i are you happy *t_i* ate the cake?
- b. ?Who_i are you sure *t_i* ate the cake?

In regard to (25), potential complement refers to the fact that, in adjectival domains, inserted *of* appears to be lexically governed. Complements of *sure* can be introduced by ‘of’ (26a), whereas complements of *happy* cannot (26b).

(26) ***‘Of’-insertion is lexically governed***

- a. I’m sure about / of this.
- b. I’m happy about / *of this.

Thus in (25b), *who* is a potential complement to *sure*, but not to *happy*.¹¹

Second, *of*-insertion is thematically ambiguous in a way that other prepositions are not. Inserted *of* in PRO-ing gerund contexts is ambiguous between Agent and Patient thematic roles, rather than different non-core thematic roles, as is the case with *in* or *to*.

(27) ***‘Of’-insertion is thematically ambiguous***

We talked about the shooting of the hunters.

Example (27) can either mean that we talked about the shooting that the hunters were doing or that we talked about the shooting where the hunters got shot.

Third, *of*-insertion can apply more than once in nominal domains (28). This is atypical for regular prepositions. It is degraded to adjoin the same PP adjunct more than once, but it appears to be fine with *of*.

¹¹ If *of*-insertion is some sort of generally available repair strategy for Caseless nominals, it seems unclear why it should be lexically governed. This might also just be a selectional restriction – but a striking one, since it seems follow a split in predicates given in Hartman (2012).

(28) ***'Of'-insertion can apply more than once in certain nominal domains*** (Siegal 1974)

- a. a car of gold of John's
- b. a picture of John of Bill's
- c. *a picture for John for Bill
- d. *a picture near John near Bill

Two instances of *of* cannot, however, appear when denoting the Agent and Patient simultaneously. Compare (27) to (29).

(29) ***Constraints on multiple 'of'***

- a. *We talked about the shooting of the deer of the hunters.
- b. We talked about the shooting of the deer by the hunters.

Finally, *of*-insertion targetting a nominal adjacent to a P⁰ is disallowed. Again this distinguished inserted *of* from canonical prepositions in similar constructions generally.

(30) ***'Of'-insertion cannot apply if the target is P-adjacent***

- a. How many did you meet of the linguists at the party?
- b. ?*How many did you talk to of the linguists at the party?
- c. How many did you meet out of all the linguists at the party?
- d. How many did you talk to out of all the linguists at the party?

The differences just described suggest that inserted *of* should not be treated as a P⁰. Rather, I will maintain that *of* is case. KPs that are generated as complements to adjectives and nouns are realized with case morphology, just like those that are generated as complements to verbs and prepositions. Failure to realize *of* in these environments is not ungrammatical due to a common Case Filter violation, but rather due to the failure to pronounce morphology. Below, I discuss what kind of case, on Marantz's (1991) Case disjunctive hierarchy, *of* is.

7.1.3.3 *'Of' is unmarked case*

If *of* is a realization of case, we are left to wonder what type of case it is – lexical/oblique, dependent, or unmarked. In this section, I suggest that *of* is best modeled as an unmarked case. We can first observe that *of* is not lexical/oblique case. Its distribution is not idiosyncratically specified. A wide range of nouns and adjectives take complements marked with *of* suggesting its distribution is more generally determined than would be expected for an exceptional case morpheme.

We can also be sure that *of* is not a dependent case. It's realization on nominal and adjectival complements is not conditioned by the presence of another KP in a local domain. *Of* is present on nominal complements with and without a possessor. Note that an account that claims that the dominating KP, or its

c-commanding K^0 , serves as a case-competitor is also untenable. Such an account cannot be extended to adjectival complements.¹² Also, it can be independently shown that an extra KP is not present within the nominal. Nominals which take an anaphoric complement can be bound outside of the nominal only when no possessor is present. Compare (31a) and (31b).

(31) ***Overt possessors restrict binding possibilities***

- a. John_i likes the picture of himself_i.
- b. John_i likes Bill_j's picture of himself_{*i/j}.

If a null KP were present in (31a) to trigger the realization of *of* on the reflexive complement, we would expect co-reference with *John* to be ill-formed, contrary to fact. The null KP should block the binding of *himself* in (31a), just as *Bill* does in (31b).

Furthermore, there is a fundamental difference between the realization of dependent accusative-marked KPs and *of*-marked KPs. In English, verbs strictly require that their objects be in a position adjacent to them, as shown in (32) (Stowell 1981).

(32) ***English Case Adjacency***

- a. Paul quickly opened the door.
- b. Paul opened the door quickly.
- c. *Paul opened quickly the door.

I will return to a more complete discussion of Case Adjacency in Section 7.2.2. For now what is relevant is Stowell's proposal that the Case adjacency condition is imposed on Case assignment, forcing a verb and an object to be adjacent. Adjectives and nouns *do not* exhibit the Case adjacency effect with their complements, as shown by the examples in (33) and (34).

(33) ***Adjectives don't display Case Adjacency***

- a. Anyone who is fearful beyond reason of traffic lights should not be allowed to drive.
- b. Sarah is considerate in every respect of her neighbor's wishes.

¹² This fact may also be problematic for a Distinctness approach to *of*-insertion. Recall from Chapter 4 that Richards (2010) suggests that the presence of the preposition *of* has nothing to do with Case. Rather, *of* provides additional structure so that an otherwise unlinearizable string can be linearized. Strings like **the proof the theorem* are ungrammatical because they are the result of an uninterpretable linearization statement of the form $\langle D, D \rangle$. Adding a preposition successfully separates the two D^0 s from each other. If the preposition *of* is a phase head, then the two instances of D^0 will not be spelled out together and will not yield the violating linearization statement $\langle D, D \rangle$. Extending the Distinctness approach to *of*-insertion with adjectival complements requires positing that adjectives and nouns have some functional head in common in their extended projections (that they don't share with verbs). Such a position is not impossible to maintain, but does require further work in establishing the presence of the requisite functional head.

- (34) *Nouns don't display Case Adjacency*
- a. The donation of money to charity
 - b. The donation to charity of money.

The examples in (34) are grammatical even though a phrase intervenes between the adjective and its object. Stowell (1981) takes this to indicate that adjectives do not assign Case to their complements. The inserted preposition *of* does. On the present view, the lack of Case Adjacency can be attributed to the fact that verbal complements receive dependent case which places certain restrictions on its realization that are not maintained for *of*-marked complements, because *of* is not a dependent case.

If *of* is neither lexical nor dependent case, we must conclude that it is unmarked case. As noted in Chapter 2, unmarked case can receive distinct morphological realizations depending on where it is realized. Nominative case can be understood as the realization of unmarked case in the clausal domain, *of* can be understood as the realization of unmarked case in complements to verbs and adjectives. If *of* is an unmarked case, we can also make sense of the ergative-like pattern of post-nominal prepositions in English. Recall from above that *of* can appear on either a Patient (35a) or Agent (35b), but not both (35c). In this case, *by* must mark the Agent (35d).

- (35) *Ergative alignment in the nominal domain*
- a. the destruction **of** the city
 - b. the destruction **of** the Roman's
 - c. *the destruction **of** the city **of** the Roman's
 - d. the destruction **of** the city **by** the Roman's

In the nominal domain, the realization of *of* cross-cuts thematic roles applying to intransitive subjects and transitive objects to the exclusion of transitive subjects. This instantiates an ergative-absolutive alignment. *By* on a post-nominal Agent does appear to require a case competitor, behaving as if it were a dependent case. Of course, much more needs to be said concerning why multiple instances of *of* can be realized and why pre-nominal possessors, regardless of thematic role do not display *of*.

Another surprising behavior of *of*, if it is a case morpheme, is its strandability. Inserted *of* need not shift with the nominal it marks in *wh*-movement contexts, though it can.

- (36) *Stranding 'of'*
- a. Who is John afraid **of**?
 - b. What did Mary order the destruction *of*?

This behavior is unlike canonical case-marking which is expected to accompany the nominal it marks under \bar{A} -movement. I have nothing definitive to say on this point, but note that stranding of case-markers is attested in other environments. Sato (2008) observes that certain dialects of Japanese permit an ellipsis construction

in which the nominal is ellided by its case morphology is retained (37).

(37) *Japanese retains case under nominal ellipsis* (Sato 2008)

- a. A: Hanako-wa kuukoo-ni tuki-masi-ta ka?
H.-TOP airport-to arrive-POL-PST Q
'Did Hanako arrive to the airport?'
- b. B: [e]-ga mada tuki-mase-n
-NOM yet arrive-POL-NEG
'(She) has not arrived yet.'

In (37b), the null NP, intended to refer back to Hanako, is elided but with the nominative case overtly realized. Sato (2008) notes, but does not provide examples, that such behavior is also found in (in)direct objects and objects of prepositions. To my knowledge, this type of ellipsis has not been reported in any other language, but illustrates that stranding of case morphology is conceivably taking place in (36). The facts in (36) may also be related to the Peeling theory of case (e.g. Starke 2005; Medová 2007, 2008; Medová & Taraldsen 2007; Jablónska 2008; Caha 2009). In short, Peeling theory holds that case markers are can be stranded as nominals move within and across clauses. These stranded elements are (usually) subsequently spelled out as part of other elements in the clause, including the verb, the auxiliaries, the passive morpheme, etc..

The discussion of *of*-insertion here has suggested that the phenomenon should be modeled as the realization of [*uCase*] in the nominal domain. Such a position turns the classic facts presented at the beginning of this section on their head. Ungrammaticality does not arise in absence of *of* because there is no Case. Rather, ungrammaticality arises in the absence of *of* because Case is present, but not pronounced. This approach brings English further in line with Latin. Recall from Chapter 1 that Vergnaud's impetus for proposing Case as a driving force of restricting the distribution of nominal was the observation that nominal complements in English appear just where accusative case is assigned in Latin. However, under common descriptions Latin and English diverge in their ability to assign non-accusative Case. Latin assigns non-accusative case to adjectival and nominal complements, whereas English does not. If, however, *of* is treated as case, English can also be said to assign non-accusative case in the same positions where Latin does.

7.2 Internal Merge

In addition to determining where nominals can enter the derivation, Case has also been implicated in determining some instances of when and why nominals undergo movement in the course of the derivation. Case-driven movement chiefly falls under the rubric of A-movement, which will be the discussion of the majority of this section, but Case has also be implemented in ruling out derivations in which instances movement, of various forms, *does not* take place, as well. The proposal offered in this dissertation denies [*uCase*]

the ability to trigger A-movement. [u Case] can survive the derivation. KPs bearing [u Case] should not undergo movement triggered just for the purpose of valuing it. To account for A-movement, other independent mechanisms of the grammar must be employed. Below, I review these accounts, and, like issues of External Merge discussed above, show that Internal Merge need not and in some instances cannot be reduced to Case theory.

7.2.1 A-movement

Case is often implicated in accounting for the obligatoriness of the movement of noun phrases in passive, unaccusative, and raising constructions. Common treatments hold that the complement position of a passive (38a,b) or unaccusative (38c) verb is unlike that of a transitive verb (37b); it is a position where (accusative) Case is not assigned. Failure to assign Case to the noun phrase in its base-position triggers movement to a position where the noun phrase can receive Case – namely, the subject position (36c) – satisfying the Case Filter. Failure of accusative Case assignment has no consequence for elements that are not noun phrases. PP (38a) and CP (38b) complements can remain within the VP.

(38) *A-movement in passives and unaccusatives*

- a. [The wind]_{*i*} was put *t_i* [under the desk].
- b. Mary_{*i*} was convinced *t_i* [that the world was ending].
- c. [The garaged door]_{*i*} opened *t_i* abruptly.

Observing the systematic failure of passive and unaccusative verbs to license accusative Case, Burzio (1981, 1986) suggests a connection between verbs which do not assign accusative Case and, simultaneously do not introduce an external argument (39).

(39) *Burzio's generalization*

If a verb licenses accusative Case, it has an external argument.

Chomsky (1995) provides the commonly accepted explanation for why Burzio's generalization should hold. He suggests that the assignment of accusative Case is not achieved by the verb itself, but by a separate functional head v^0 , simultaneously responsible for accusative Case assignment and external argument introduction.¹³ Chomsky links the Case-assigner to the introduction of an external argument, with distinct 'flavors' of v^0 either introducing an external argument and assigning accusative Case (i.e. transitive constructions), or doing neither (i.e. passives and unaccusatives).

¹³ Though Chomsky (2008) suggests that V^0 is the locus of accusative Case assignment just in case the right instance of v^0 is employed. See Holmberg (1986), Kayne (1989), Pollock (1989), Chomsky (1991, 1993), and Koopman (1992) for earlier proposals arguing for the need of a functional head analogous to v^0 . Also see Wurmbrand (1998, 2001) for an argument in favor of v^0 as the locus of accusative Case assignment. Kratzer (1996) establishes the need for a separate head to introduce external arguments on semantic grounds.

Similarly, the failure of non-finite T^0 to assign Case to subjects of such clauses (11c) motivates obligatory raising of an infinitival subject out of the complement of an unaccusative verb like *seem*.

(40) ***A-movement in raising***

Mary_i seemed [*t_i* to have written the letter].

The subject position of infinitival clauses is not a Case position; movement of infinitival subjects must occur in raising constructions to satisfy the Case Filter.

The Case-theoretic account of A-movement is in most respects redundant with the EPP – another proposal for the need for *some* element to occupy the subject position. The EPP explains why verbs that take sentential complements like *believe* in (41) display optional movement in their passivized forms.

(41) ***Possible passive forms of ‘believe’***

a. [That John was the thief]_i was believed *t_i* by everyone.

b. It was believed by the everyone that John was the thief.

Both examples in (40) and (41) satisfy the EPP, but only (40b) satisfies the Case Filter. Since Chomsky (1995 *et seq.*) the redundancy has commonly been resolved by reducing the import of Case theory. Specifically, A-movement is held to be driven by the EPP, modeled either as an independent requirement of certain functional heads or as a requirement of particular features – *strong features* – hosted by a functional head. [*uCase*] serves to indicate which nominals are available targets for probing, but is valued prior to movement.

Others have sought to further eliminate the redundancy of Case and the EPP. In this vein, two general approaches have been adopted: (i) reduce the EPP to Case theory (e.g. Borer 1986; Fukui & Speas 1986; Bošković 1997, 2002, 2007; Epstein & Seely 1999, 2006; Martin 1999; Boeckx 2000; Grohmann et al. 2000), (ii) retain the EPP and eliminate Case theory (e.g. Zaenen, Maling & Thráinsson 1985; Yip, Maling & Jackendoff 1987; Marantz 1991/2000; McFadden 2004; Sigurðsson 2009, 2010).

Reducing the EPP to Case theory requires assuming that, in the case of A-movement, nominative Case assignment must be established via movement. Only by undergoing movement to subject position, thereby satisfying the EPP, will the subject of passives, unaccusatives, and infinitives embedded under raising predicates receive Case and satisfy the Case Filter. This approach is sometimes termed the *Inverse Case Filter*; a Case assigning element must assign its Case. Bošković (2007), however, captures EPP-movement under the classic Case Filter. It is this model that I introduce here, because, as Bošković (2007) notes, there are some inadequacies faced by Inverse Case Filter models which will be discussed below.

Bošković (2007) suggests that [*uCase*]-valuation is not a special instance of AGREE in which the probe is structurally lower than the goal.¹⁴ Rather, he holds that AGREE is a uniformly downward-looking operation; probes always c-command their goals. What makes case assignment unique among (most) [*uF*]-valuation

¹⁴ See Chapter 2 for some discussion.

operations is that the probe is generated lower than the goal. Bošković (2007) suggests that probes that fail to find a goal in the c-command domain uniformly undergo successive-cyclic movement *through each subsequent specifier* until they come to c-command a relevant goal.¹⁵ This position immediately captures the behavior of A-movement. Nominals generated as complements to unaccusative, passive, and raising predicates must raise to a position above T⁰ to enter an Agree relationship with T⁰, valuing [*uCase*] as nominative. The proposal can also be employed to capture successive-cyclic \bar{A} -movement as well as overt object shift of transitive objects and ECM subjects to a position above an accusative-bearing head (e.g. Authier 1991; Johnson 1991; Ura 1993; Koizumi 1995; Bošković 1997a,b, 2002, 2004; Runner 1998; Epstein & Seely 1999, 2006; Lasnik 1999, McCloskey 2000; Boeckx & Hornstein 2005).¹⁶ The proposal effectively subsumes the basic A-movement facts from English into Case-theoretic terms. There is no generalized EPP. Rather, the need to value [*uCase*] is the trigger of A-movement.

An immediate advantage of this proposal is that it captures successive-cyclic A-movement effects often held as a strong argument in favor of an independent EPP. As is well-known, raising proceeds through intermediate specifiers. This is indicated by Q-float (42a) and binding possibilities (42b).

(42) ***Successive-cyclic raising***

- a. The students_{*i*} seem all *t_i* to know French.
- b. Mary_{*i*} seems to John [*t_i* to appear to herself/*himself *t_i* to be in the room].

The position of *all* in (42a) has been explained by assuming that *the students* has moved through that position and stranded the quantifier there Sportiche (1988).¹⁷ Perhaps even more convincing is the availability of *herself* and the unavailability of *himself* in the embedded clause in (42b). The simplest way to account for this is to assume that *Mary* has moved through Spec-TP in the intermediate clause, leaving a trace that binds the anaphor and blocking binding by the higher antecedent *John*. Movement through intermediate positions falls out if there is an EPP requirement in every intermediate clause, forcing the embedded subject to raise successively through each on its way to the matrix subject position. If Spec-TP of a non-finite clause is not a Case position, it is unclear why A-movement should proceed through the position if A-movement is triggered *solely* for [*uCase*]-valuation. However, in Bošković's (2007) proposal successive-cyclic movement

¹⁵ One possible short-coming of this analysis is that it permits complement-to-specifier movement within an XP and specifier-to-specifier movement across a XP. Both of these movements have been, under certain analyses, deemed too local. See Abels (2003) and Erlewine (2014) respectively.

¹⁶ This proposal requires that intermediate movement not be driven by functional heads – a position also endorsed by Heck & Müller (2000, 2003) and Chomsky (2013). However, see arguments from McCloskey (2002), Abels (2012), and Van Urk (2015) that intermediate movement must be feature-driven.

¹⁷ Various proposals have rejected Sportiche's (1988) analysis of quantifier float (e.g. Doetjes 1992, 1997; Baltin 1995; Bobaljik 1995, 1998/2001). Nevertheless, some of the proposed alternatives provide identical results. McFadden (2004) notes, for example, that Baltin (1995)'s position holds that floated quantifiers are generated in their surface positions, not as modifiers of the DPs in question, but he proposes that they must be specifiers of syntactic predicates. Crucially, syntactic predicates require subjects, and what makes the phrase headed by *to* predicative is the fact that *Mary* has raised through its subject position.

arises as a result of *attempted* [*uCase*]-valuation. The subject moves through intermediate Spec-TP, just as it moves through all intermediate XPs in search of a goal.¹⁸

In the remainder of this section, I explore a number of arguments that suggest that the EPP cannot be subsumed by Case Theory.

7.2.1.1 Restrictions on PNI arguments

The first argument I present is a novel one derived from some of the data with which this dissertation is chiefly concerned. As noted in Chapter 4, Niuean disallows PNI of unaccusative subjects when those subjects are the sole argument of the clause (43) (Seiter 1980, Massam 2001).

(43) *Illicit unaccusative subject PNI* (Seiter 1980)

- a. *(Ma)-mate tagata he gagao vevela
(PL)-die person CAUS illness hot
'People die of fever.'
- b. *Ne nonofo tagata
PST settle people
'People settled.'

This restriction is surprising if Niuean verbs generally c-select, and permit the free merger of, structurally reduced nominals (Massam 2001, Clemens 2014) in complement position. If PNI objects do not require Case (Massam 2001) or, as argued for above, PNI objects cannot bear Case and must be head-adjacent, the ungrammaticality of PNI unaccusative subjects cannot be reduced to traditional Case theory. Both the traditional and proposed Case Filters, repeated as examples (1) and (2) of this chapter, are in fact satisfied. On the former view, no Case Filter violation arises because the PNI unaccusative subject does not bear [*uCase*], i.e. it is not a KP, ensuring that the common Case Filter cannot be violated. Under the proposed Case Filter, no violation is expected, because the Caseless unaccusative subject is adjacent to the verb, Local Dislocation should be able to license the nominal under linear adjunction, as proposed in Chapter 4.

Lacking a common Case Filter explanation, two alternative explanations for the ungrammaticality in (43) are available: (i) Maintain a Case-theoretic explanation of the data by adopting the Inverse Case Filter (Bošković 1997, 2002; Epstein & Seely 1999, 2006; Martin 1999; Boeckx 2000; Grohmann et al. 2000). (ii) Adopt an independent EPP. Under the first alternative, the ungrammaticality of the examples in (43) can be captured as a failure to discharge absolutive Case to some argument. Under the second alternative, ungrammaticality of the examples in (43) can be explained as a failure for some argument to fill a specific

¹⁸ Other approaches seeking to eliminate the EPP have also proposed analyses for the successive-cyclic movement data. For instance Boeckx (2000) and Bošković (2002, 2007) argue that successive-cyclic movement can be derived without the EPP from general constraints on movement. Epstein & Seely (1999) and Grohmann et al. (2000) argue that such data can be accounted for without appealing to successive-cyclic movement at all.

functional head's specifier.¹⁹

The former position is taken by Massam (2001). However, as Bošković (2007) notes, there are independent reasons for abandoning the Inverse Case Filter. First, some verbs assign case only optionally, which violates the strictest implementation of the Inverse Case Filter, as any failure to assign Case should trigger ungrammaticality:

(44) *Some verbs optionally assign Case*

- a. He laughed (himself silly).
- b. She dressed (herself).
- c. Coppe is eating (a hotdog).

If an optionally transitive verb is able to assign Case, the Inverse Case Filter would require that that Case feature necessarily be assigned, effectively eliminating the possibility of optional transitives.

At first blush, it would seem possible to explain the data in (44) and maintain the Inverse Case Filter if optionally transitive verbs were analyzed as involving two separate verbs in the lexicon, one transitive and one intransitive (e.g. Fodor & Fodor 1980, Mittwoch 1982). Bošković (1997) takes this position. In that case, the Inverse Case Filter could be preserved. When the transitive form is used, accusative Case is obligatorily discharged. When the intransitive form is used there is not accusative Case to discharge. However, this position is untenable, Gracanin-Yukse (2007) provides independent evidence that optionally transitive verbs cannot be modeled as distinct, homophonous lexical items.²⁰ She observes that bi-clausal multiple *wh*-questions are only well-formed with optional transitives, as in (45).

(45) *Bi-clausal multiple wh-questions*

- a. What and where did you sing?
- b. What and when did you dance?
- c. *Which juice and where did you sell?
- d. *What and when did you see?

Gracanin-Yukse (2007) provides arguments that, underlyingly, the examples in (45a,b) contain two well-formed CP conjuncts. However, in examples (45c,d) the second conjunct contains a verb that is missing the internal argument. This leads to ungrammaticality. Gracanin-Yukse goes so far as to argue that the coordinated CPs should be modeled as multidominance structures sharing a significant part of the architecture of the coordinated CPs, including the verb itself. On this view, there must be one lexical item. Only if optionally transitive verbs are truly optionally transitive can this analysis be maintained. Appealing to distinct lexical entries for transitive and intransitive forms appears untenable, and the data in (44) pose a true

¹⁹ The functional head in question is most likely v^0 . Massam (2000) argues that T^0 has no EPP requirement in Niuean. Also, Van Urk & Richards (2015) demonstrate that v^0 displays a V2 effect in Dinka (Nilotic; South Sudan).

²⁰ I thank Omer Preminger for bringing these data to my attention.

problem for the Inverse Case Filter.

A second argument against the Inverse Case Filter comes from environments in which transitive objects receive non-canonical case. In many Slavic languages, accusative Case is not realized on certain direct objects, for instance, in genitive of quantification and genitive of negation constructions (Bošković 2007; see also Franks 2002 for relevant discussion). Verbs that assign accusative case fail to do so when their object contains a higher-numeral; this is illustrated for Serbo-Croatian in (46). The same scenario can occur when a verb is negated, as illustrated by Polish (46), where genitive of negation is obligatory (47).

(46) *Serbo-Croatian genitive of quantification* (Bošković 2007)

- a. On ce kupiti kola
he will buy car.ACC
'He will buy a car.'
- b. On ce kupiti pet kola
he will buy five cars.GEN
'He will buy five cars.'

(47) *Polish genitive of negation* (Bošković 2007)

- a. Janek czytat książkę
J. read book.ACC
'Janek read a book.'
- b. Janek nie czytat książki
J. neg read book.GEN
'Janek did not read a book.'

As Bošković (2007) notes the Inverse Case Filter would deem constructions like (46b) and (47b) ungrammatical, because accusative Case has not been discharged, assuming that the absence of case morphology means that the Case hasn't been discharged.

If the Inverse Case Filter is untenable, we must conclude that the ungrammaticality of unaccusative PNI subjects in Niuean occurs because the EPP is not satisfied. Further support for an EPP analysis of this restriction comes from the observation that unaccusative subjects can undergo PNI so long as another argument is present to satisfy the EPP-requirement, as in (48).

(48) *Licit unaccusative subject PNI* (Massam 2001)

- Ko e liga ne kamata nonofo tagata a Niue
PRED ABS likely N.FUT begin settle people ABS Niue
'... the likelihood that people began to settle in Niue ...'

This data point illustrates that there is not some independent, idiosyncratic restriction on the merger of structurally reduced nominals as complements to unaccusative verbs. Rather, the data have a ready explanation in terms of the EPP that is unavailable in Case-theoretic terms. The EPP cannot be subsumed within Case theory, because arguments that do not need Case are, nevertheless, subject to the requirement of satisfying

the needs of certain functional heads to have their specifiers filled. Furthermore, this need itself cannot be reduced to Case-theoretic terms, because the Inverse Case Filter is untenable, and because such nominals are unable to move, they fail to satisfy the requirement, yielding ungrammaticality.

7.2.1.2 *Verb Second*

Another advantage of an approach to A-movement that depends on the needs of the targeted functional heads rather than the moving DPs – i.e. that depends on the EPP rather than Case – is that it can be extended to handle phenomena like Verb Second (e.g. McFadden 2004). Verb Second (V2) requirements have a profile reminiscent of the EPP. They are independent requirements of some functional heads to have their specifiers filled. Moreover, this requirement is demonstrably insensitive to Case. In V2 languages of the German type, there is a requirement that some XP move to an initial position in matrix clauses. This behavior is freer than that of English EPP; any constituent can move to initial position. Crucially, Germanic V2 effects have no ramification for Case²¹. Arguments that occupy first position bear the same case they would bear if they did not occupy first position. Consider the examples in (49) from Swedish.

(49) *Swedish V2* (Holmberg 2010)

- a. **Jag** har ärligt talat aldrig sett huggormar i den här skogen
I.NOM have honestly speaking never seen adders in this here forest
 ‘To be honest I’ve never seen adders in this forest.’
- b. Huggormar har **jag** ärligt talat aldrig sett i den här skogen
 adders have **I.NOM** honestly speaking never seen in this here forest
 ‘To be honest I’ve never seen adders in this forest.’
- c. I den här skogen har **jag** ärligt talat aldrig sett huggormar
 in this here forest have **I.NOM** honestly speaking never seen adders
 ‘To be honest I’ve never seen adders in this forest.’
- d. Ärligt talat har **jag** aldrig sett huggormar i den här skogen
 honestly speaking have **I.NOM** never seen adders in this here forest
 ‘To be honest I’ve never seen adders in this forest.’

The nominative pronoun *jag* retains its form regardless of position. Furthermore, once one element has raised to this position, nothing else in the clause is forced to move. Only one XP *must* move, and any XP *can* move. This behavior suggests that V2-movement is driven by the requirements of a functional head in the CP/TP domain and not by the needs of the moving XPs.

Furthermore, there is no convincing evidence that any other KP movement is required in German clauses beyond this V2-driven movement. Usually, the subject raises to Spec-CP, but if some other XP does, the subject can remain *in situ*. In order to maintain parallels with languages like English, one might maintain that German subject move to Spec-TP just as English ones do. However, Haider (1993, 1997, 2000a,b)

²¹ As observed in Chapter 2, Dinka V2 *does* have ramifications for Case

demonstrates that this assumption is incorrect.²² Haider (1997) notes that, unlike English, sub-extraction is equally licit out of both subject and object position. In English, extraction from a clause is blocked when it has raised to subject position, as in (50b). Extraction from the same clause is licit if the clause remains in situ as in (50c).

(50) *English subject/object sub-extraction asymmetries* (Haider 1997)

- a. To discuss that with him would be worthwhile.
- b. *What_i would [to discuss t_i with him] be worthwhile?
- c. What_i would it be worthwhile [to discuss t_i with him]?

These facts are commonly taken to indicate that the subject DP has raised from its base-position, while the object DP has not. If moved elements are islands for extraction the asymmetry then follows. However, German sentences analogous to (50a), as in (51a), demonstrate that extraction is possible out of the embedded clause even when, as in (51b), it is the subject of the matrix clause.

(51) *German lacks subject/object sub-extraction asymmetries* (Haider 1997)

- a. Mit ihm das zu besprechen würde sich lohnen
with him that to discuss would REFL reward
'To discuss that with him would be worthwhile.'
- b. Was_i würde [mit ihm t_i zu besprechen] sich denn noch lohnen
what would [with him to discuss] REFL then still reward
'What would it still be worthwhile to discuss with him.'

The well-formedness of (51b) suggests that the subject remains in its base-position. Crucially, if the assumptions are correct, it does not appear to move to Spec-TP for Case purposes.

Additionally, nominative subjects can move to Spec-CP within the VP, (52) (McFadden 2004).

(52) *German VP-fronting* (McFadden 2004)

- a. [Ein wunder ereignet]_i hat sich hier noch nie t_i
a miracle occurred has REFL here still never
'A miracle has never occurred here.'
- b. [Wunder ereignet]_i haben sich hier noch nie t_i
miracles occurred have REFL here still never
'Miracles have never occurred here.'

If subject licensing is supposed to take place VP-externally, it should force raising of the VP-internal subject to a derived position, in order to value [*u*Case]. Furthermore, the requirement is expected to hold of all subjects, no matter where they are base-generated. Unaccusative subjects should not be able to front with the VP to initial position. Rather they are predicted to move to Spec-TP to value [*u*Case], contrary to fact.

²² Similar observations have also been made by Meurers (1999) and Wurmbrand (2006)

German appears to lack the English EPP requirement (filled Spec-TP). It has instead a V2 requirement (filled Spec-CP). German expletives are clearly inserted to satisfy such this requirement, rather than the EPP (McFadden 2004, Wurmbrand 2006).

(53) *German does not permit expletives in Spec-TP* (McFadden 2004)

- a. Es wird heute getantzt
it becomes today danced
'There will be dancing today!'
- b. Wird (*es) heute getantzt
becomes (*it) today danced
'Will there be dancing today?'
- c. Heute wird (*es) getantzt
today becomes (*it) danced
'Today there will be dancing!'

Expletive *es* only appears in V2 clauses like (53a), and not in *yes-no* questions like (53b), as these constructions utilize V1 structure. It also fails to appear if something else raises to Spec-CP to satisfy the V2 requirement, like the temporal adverbial *heute* 'today' in (53c). This behavior is clearly distinct from the EPP-driven appearance of English *there*.

Still, the EPP and the V2 requirement are reducible to the same abstract situation; a functional head requires a filled specifier. What categories can satisfy the requirement (English DP, German XP) appears to differ. If we take displacement to be driven by the needs of functional heads, we arrive at a unified account of V2 and the EPP (McFadden 2004; see also Heycock 1991). The Case-theoretic view of A-movement, on the other hand, provides no insight into V2 topicalization, and offers no clear explanation of how nominative case is available on *in situ* subjects.

Related to V2 effects are a number of other constructions attested in a variety of languages in which a nominal surfaces with Case, but does not appear to undergo movement, like English *there*-existentials and locative inversion. *Prima facie*, these constructions also seem like good candidates for demonstrating the dissociation of Case and movement; a nominative argument appears in a position that cannot be identified as Spec-TP. Seemingly dissociating Case and the EPP; nominative case in these contexts is not assigned under movement. I will not present these facts here. Aware of these facts, Bošković (2007; and sources cited therein) offers a number of explanations for such instances of nominative case: (i) The nominative case in question is not a [*u*F], and need not be valued. (ii) The nominative case in question is actually a default case. (iii) The nominative case in question is checked by a head lower than T⁰. (iv) The nominative element moves, but a lower copy is pronounced. (v) Postverbal nominatives are located in a rightward Spec-TP. Much additional work is necessary to determine which if any of these options is correct in each context, or if retaining the EPP is more advantageous.

7.2.1.3 Non-nominative subjects

Another argument against reducing EPP to Case involves languages/constructions in which non-nominative subjects appear to undergo A-movement. Taken at face value, these scenarios show a clear dissociation of Case and the EPP, a nominal moves but clearly not for Case. Mismatches of this kind have received, in some instances, Case-theoretic explanations which strengthen the distinction between abstract Case and morphological case, but a more parsimonious view is offered by adopting one form of Case and the EPP.

A well-known argument that has been offered in favor of an EPP approach to A-movement in place of a Case-driven account is the behavior of ‘quirky’ case-marked arguments in Icelandic (e.g. Zaenen et al. 1985, Sigurðsson 1989, 1991, 2000; Marantz 1991/2000; McFadden 2004, 2009; Thráinsson 2007). Quirky case refers to morphology other than the canonical nominative-accusative alignment. Icelandic quirky case arguments behave like canonical arguments with respect to A-movement (Andrews 1976, Thráinsson 1979). For instance, complements to the verb *hjaálpa* bear dative, not accusative, case (54a), which is retained in the passive (54b).

(54) *Icelandic quirky case and passivization* (Zaenen et al. 1985)

- a. **Ég** hjálpaði **honum**
I.NOM helped **him.DAT**
‘I helped him.’
- b. **Honum** var hjálpað
him.DAT was.SG helped
‘He was helped.’

Retention of quirky case is unlike the behavior of accusative case which is absent in passives. The behavior of quirky arguments, as in (54), is at odds with a theory that aims to derive A-movement to subject position from the Case Filter. In both active (54a) and passive (54b) constructions, the internal argument receives dative case. Assuming a direct mapping from Case to case, the internal argument should immediately satisfy the Case Filter. There would appear to be no need for A-movement to take place in order to receive Case. These facts can be understood in light of the EPP. Movement is not driven by Case, but by the need for the subject position to be filled.

However, numerous researchers (e.g. Belletti 1988; Cowper 1988; Freidin & Sprouse 1991; Bejar & Massam 1999; Frampton & Gutmann 1999; Chomsky 2000, 2008; Bošković 2002, 2007; Williams 2006) have assumed that Icelandic quirky case is exceptional and does not bear on Case theory. Proponents of this idea, make the assumption that Icelandic quirky subjects are assigned *abstract* nominative Case, in addition to their inherent morphological case. On this view there is a morphological mismatch between Case and case.²³ In (54b), the internal argument moves to Spec-TP to value [*u*Case] against nominative on T⁰, but by virtue of being base-generated as complement to a quirky case verb, nominative Case is realized as dative case.

²³ Recall the mismatches demonstrated by Legate (2008) for Djapu in Chapter 6.

As Sigurðsson (2009) observes, non-nominative subject constructions, where the nominative objects control agreement of the verb as in (55), cast doubt on this approach.

(55) *Nominative arguments control agreement* (Thráinsson 2007)

- a. **Peir seldu** bókina
they.NOM sold.PL book.the.ACC
 ‘They sold the book.’
- b. Henni **líkuðu hestarnir**
 her.DAT liked.PL horse.the.PL.NOM
 ‘She liked the horses.’
- c. ***Morgum studentum líka** verkið
many students.DAT like.PL job.NOM
 ‘Many students like the job.’

If for the purposes of Case (and by extension agreement) quirky dative subjects bear abstract nominative Case. It is unclear why quirky subjects are not able to control agreement (55b,c) while nominative case-marked objects, which presumably bear abstract accusative Case, are able to control agreement (55a). As Bobaljik (2008) argues, once the agreement facts are considered, the Case/case mismatch offered for understanding the quirky case facts appears untenable. If the quirky case arguments bear canonical abstract Case, it should be abstract Case that determines which argument controls ϕ -agreement. This prediction runs contrary to fact, suggesting there is no abstract Case and that quirky case-marked elements undergo A-movement for non-Case-theoretic reasons – namely the EPP.

Another argument of the same form can be constructed for ergative languages which display EPP effects. Common accounts of ergative case dissociate it from T^0 . Ergative case is either a lexical case assigned by (certain flavors of) v^0 to its specifier (e.g. Woolford 1997, 2008; Aldridge 2004, 2008; Anand & Nevins 2006; Legate 2008, 2012, 2014), or a dependent case assigned to the higher of two nominals in an asymmetric c-command relationship (Marantz 1991/2000; McFadden 2004, Preminger 2011, 2014; Levin & Preminger 2015).²⁴ If an ergative subject’s [*u*Case] is valued immediately upon External Merge, which is the case under either of these proposals, subsequent movement to Spec-TP cannot be triggered by the presence of [*u*Case], as Bošković’s analysis would hold. An independent mechanism, like the EPP, must be driving this movement.

It is often hard to discern if ergative languages/constructions have EPP effects. This is due to the fact that they are uniformly VSO or SOV (e.g. Trask 1979, Mahajan 1994). Without clause-medial verbal elements, it is hard to deduce if and where subjects move. Some have even gone as far as to suggest that ergative constructions never display EPP-effects (e.g. Lahne 2008). Nevertheless, data exist to suggest that (in some cases) ergative subjects *do* seem to display EPP-effects. The most striking data comes from language with split-ergative patterns, allowing for the comparison of nominative and non-nominative subjects. These environments reveal that the two undergo the same EPP-driven movement operation, and call into question

²⁴ Both views contradict Bobaljik’s (1993) proposal that ergative case is assigned by T^0 .

attempts to subsume the EPP to Case.

Hindi displays EPP-effects in both ergative and non-ergative constructions. Regardless of case-marking, subjects bind subject-oriented anaphors (56), cannot be co-referent with the pronoun *uskii* (57) and control into participial adjuncts (26) (Anand & Nevins 2006).

(56) *Uniform binding of subject-oriented anaphors* (Anand & Nevins 2006)

- a. **Salmaa** Raam-se Mohan-ko apnii kitaab bhijvaayegii
S.NOM R-INST M.-DAT self's book.NOM send.CAUS.FUT
 'Salma_i will get Raam to send Mohan self_i's book.'
- b. **Salmaa-ne** Raam-se Mohan-ko apnii kitaab bhijvaayii
S-ERG R-INST M.-DAT self's book.NOM send.CAUS.PERF
 'Salma_i got Raam to send Mohan self_i's book.'

(57) *Uniform obviation of 'uskii'* (Anand & Nevins 2006)

- a. **Salmaa** Raam-se Mohan-ko uskii kitaab bhijvaayegii
S.NOM R-INST M.-DAT self's book.NOM send.CAUS.FUT
 'Salma_i will get Raam_j to send Mohan_k self_{*i/j/k}'s book.'
- b. **Salmaa-ne** Raam-se Mohan-ko uskii kitaab bhijvaayii
S-ERG R-INST M.-DAT self's book.NOM send.CAUS.PERF
 'Salma_i got Raam_j to send Mohan_k self_{*i/j/k}'s book.'

(58) *Uniform control into participial adjuncts* (Anand & Nevins 2006)

- a. **Salmaa** Raam-se Mohan-ko [PRO adres khoj kar] uskii kitaab bhijvaayegii
S.NOM R-INST M.-DAT [address search do] self's book.NOM send.CAUS.FUT
 'PRO_i Having searched for the address, Salma_i will get Raam_j to send Mohan_k self_{*i/j/k}'s book.'
- b. **Salmaa-ne** Raam-se Mohan-ko [PRO adres khoj kar] uskii kitaab bhijvaayii
S-ERG R-INST M.-DAT [address search do] self's book.NOM send.CAUS.PERF
 'PRO_i Having searched for the address, Salma_i got Raam_j to send Mohan_k self_{*i/j/k}'s book.'

Anand & Nevins (2006), following Ura (2001), take these common properties to indicate that regardless of subject Case, the subject has moved to Spec-TP. This position is supported by the fact that passive subjects also display the attested properties, indicating that they cannot be associated with the subject's base-position.

Nevertheless, distinct case-marking possibilities do have ramifications. Nominative subjects can reconstruct while ergative subjects cannot (59).

(59) *Hindi ergative constructions are scope rigid* (Anand & Nevins 2006)

- a. Koi shaayer har ghazal likhtaa hai
 some poet.NOM every song.ACC write.M.IMPF be.PRS
 'Some poet writes every song.'

[$\exists > \forall$; $\forall > \exists$]

- b. Ksiii shaayer-ne har ghazal likhii
 some poet-ERG every song.NOM write.F.PERF
 ‘Some poet wrote every song.’

[$\exists > \forall$; $*\forall > \exists$]

Anand & Nevins attribute this difference to the locus of Case-assignment. Nominative case is assigned by T^0 , while ergative Case is assigned by v^0 . Taken together these facts suggest that Hindi displays EPP in both ergative and non-ergative alignments despite the fact that ergative alignments involve Case assignment *in situ*. Note that the scope facts cannot be reduced to a PF mismatch between Case and case, because changes in case morphology have semantic ramifications. This dichotomy suggests that the EPP is independent of Case.

Adiyama Kurmanji also displays EPP-effects across ergative and non-ergative alignments (Atlamaz 2012). The most powerful evidence for the EPP comes from the distribution of floating quantifiers with respect to auxiliaries. When the positions of the floating quantifier *gi* ‘all’ with respect to the auxiliaries in (60) and (61) are considered, it is evident that the subject has moved, assuming that stranded quantifiers indicate positions previously occupied by the nominals that they modify (Sportiche 1988).

(60) ***Kurmanji nominative subject quantifier stranding*** (Atlamaz 2012)

- a. Em **gi** dike he-ni
 we.NOM **all** will go-PL
 ‘We all will go.’
- b. Em dike **gi** he-ni
 we.NOM will **all** go-PL
 ‘We will all go.’

(61) ***Kurmanji ergative subject quantifier stranding*** (Atlamaz 2012)

- a. Me **gi** kir he-ni
 we.ERG **all** do.PRT go-PL
 ‘We all would go.’
- b. Me kir **gi** he-ni
 we.ERG do.PRT **all** go-PL
 ‘We would all go.’

Regardless of case-alignment, the ability to strand the quantifier to the right of the auxiliary suggests that nominative and ergative subjects move to Spec-TP. As with the Hindi data these facts suggest dissociating Case and the EPP. Non-nominative subjects, which do not need to enter an Agree relationship with T^0 to value [μ Case] nevertheless undergo A-movement to Spec-TP.

To conclude this section, then, a fuller examination of the facts about which KPs move where support the idea that such movement is driven by the needs of clauses and their functional categories (EPP), not by the needs of the KPs themselves (Case). The EPP – not Case – in conjunction with conditions of expletive-associate relationships, which are independently required for traditional Case-theoretic approaches in which

Case is assigned under c-command, helps to determine the distribution of nominals when those nominals are full KPs. [*u*Case] can survive the derivation, and as such, its valuation cannot be seen as an impetus for movement. The EPP must be retained as an independent grammatical mechanism. Of course, the conceptual advantage of removing the EPP is lost, but this does not mean that the EPP must be stipulated *ad hoc*. For instance, see Richards (2014) for a recent attempt to derive the EPP.

7.2.2 Object shift and Case Adjacency

Another observation concerning the distribution of KPs in English that has received a Case-theoretic explanation is the position of accusative Case-marked elements in English. Arguments bearing accusative case must be adjacent to the verb.²⁵ For instance, in English, a manner adverb cannot licitly break up adjacency between the verb and its nominal complement (62).

(62) *Adverbs disrupt verb-complement adjacency*

- a. Pam (quickly) opened (*quickly) the door (quickly).
- b. James (quietly) read (*quietly) her book (quietly).

Adverbs placed either before the verb or after the object are well-formed, but adverbs placed between the verb and object yield ungrammaticality. Crucially, verbs that take PP complements display no adjacency requirement (63).²⁶

(63) *No adjacency requirement on PPs*

- a. Carrey spoke loudly with everyone.
- b. Frank looked carefully at him.
- c. Sandra relies frequently on it.

This observation extends to all arguments thought to be assigned accusative Case. Direct objects of prepositional ditransitives (64a), both arguments of double object constructions (64b) and infinitival subjects embedded under ECM predicates (64c) all require linear adjacency with the verb.

(64) *Generalized adjacency*

- a. Aaron (secretly) gave (*secretly) the note (secretly) to Sue (secretly).
- b. Aaron (secretly) gave (*secretly) Sue (*secretly) the note (secretly).
- c. Aaron (sincerely) believes (*sincerely) Sue (sincerely) to be a friend (sincerely).

²⁵ This requirement is only true of prosodically neutral clauses. Operations like *Heavy NP Shift* may alter the canonical order of arguments.

²⁶ Pesetsky (1989) and Johnson (1991) provide arguments that rightward movement of the PP is an untenable explanation.

Relatedly, the condition that accusative-marked nominals be adjacent to the verb dictates the order of arguments. Nominal arguments must precede other arguments, including PPs (65a,b) and CPs (65c,d). There are no such ordering effects when the two complements are non-nominal. Multiple PP complements to a verb like *talk* to can be freely ordered with respect to one another (66).

(65) ***Case Adjacency determines the order of arguments***

- a. Gary introduced Mike to Sam.
- b. *Gary introduced to Sam Mike.
- c. Gary told Saul to leave.
- d. *Gary told to leave Saul.

(66) ***Multiple PP-complements to V⁰ can be ordered freely***

- a. Julia talked to Jillian's grandfather about Tommy.
- b. Julia talked about Tommy to Jillian's grandfather.

One influential account of the facts presented above relies on the common Case Filter, which is able to distinguish nominals from other phrases. That KPs must precede other complements can be understood if Case-marked positions precede others. Stowell (1981) and Chomsky (1981) exploit the fact that the first position among the verbal complements in English is also the one closest to the Case assigning verb to suggest that Case is assigned to adjacent positions. This 'adjacency condition' on Case assignment in conjunction with the Case Filter guarantees that KPs precede other complements in English. Failure to appear in this position ensures failure to receive Case, triggering a Case Filter violation. The data must be understood differently to maintain the proposed Case Filter.

7.2.2.1 Problems for Case Adjacency

Ignoring for the moment the difficulty of deriving Case Adjacency from a Dependent Case model – if the verb does not assign accusative Case, adjacency between the noun and verb cannot be a condition of its assignment – a number of problems have been identified with how Case Adjacency explains the distribution of nominal complements with respect to non-nominal complements and the verb. I take these difficulties to motivate a non-Case-theoretic account of the data.

First, while there appears to be an adjacency condition on the assignment of accusative Case in English, there is no comparable requirement for the assignment of nominative case (Johnson 1991). If, as commonly held on the Agree model and previous analyses of Case assignment, T⁰ is responsible for the assignment of nominative case, the acceptability of (67) is surprising.

(67) ***Subjects show no Case Adjacency***

- a. Tim *definitely* has left.
- b. Tim *in fact* will leave.

An adverb interrupts adjacency between the nominative subject and the supposed Case-assigner. Nominative Case is thus unlike accusative Case in English and Case Adjacency would have to be limited in its application. Restricting the adjacency condition to accusative would appear to render it nothing more than a restatement of the facts.

Second, once we consider languages other than English, the Case Adjacency condition makes empirically wrong predictions even with respect to accusative Case. In English, the subject of a small clause is adjacent to the matrix verb (68) as predicted by the Adjacency Condition. However, in head final languages such as German, the embedded subject and the matrix verb are separated by the small clause predicate, contrary to what is predicted by the Case Adjacency condition (69) (Johnson 1992; see Stowell 1981, Koopman 1990 for similar discussion of Dutch facts).

(68) *English shows adjacency ...*

- a. I consider Mary uncaring.
- b. *I consider uncaring Mary.

(69) *...German does not* (Koizumi 1995)

- a. ... daß ich Studenten dieser Uni für intelligent halte
that I students of.this university for intelligent hoped
'...that I consider students of this university intelligent.'
- b. ?*... daß ich für intelligent Studentendieser Uni halte
that I forintelligent students of-this university hoped

Even more strikingly, French displays the opposite pattern of adjacency requirements from English. In French, the subject must be adjacent to the verb (70a) while the object can be separated by an adverb (70b).

(70) *French adjacency requirements* (Koizumi 1995)

- a. *Les enfants probablement ont vu ce film
the children probably have seen this movie
'The children have probably seen this movie.'
- b. Pierre a vu à peine Marie
P. has seen hardly M.
'Pierre has hardly seen Marie.'

Given that French instantiates the pattern of Case Adjacency exactly opposite from English, we must wonder if a unified account of Case Adjacency can be maintained cross-linguistically, or if such an attempt would reduce to simply listing the C/cases, if any, which enforce an adjacency condition in a given language. If no unified account of adjacency can be developed, it should be abandoned in favor of alternative proposals.

7.2.2.2 Overt object shift

Given the short-comings of the Case Adjacency proposal, several researchers have suggested that the Case adjacency effects in English arise due to language-specific parameter settings (e.g. Authier 1991, Johnson 1991, Ura 1993, Koizumi 1995, Boskovic 1997a,b, 2002a, 2004a, 2007, Runner 1998, Epstein & Seely 1999, 2006, Lasnik 1999, McCloskey 2000, Boeckx & Hornstein 2005). Specifically, building on the insight of Emonds (1976) and Pollock (1989), these proposals suggest that English has the correct combination of verb and object movement, as well as necessary restrictions on adverb placement, ensuring that objects and ECM subjects undergo overt movement to a position immediately below the verb which has itself undergone movement, but not as high as in languages like French. These operations, combined with a ban on merging adverbs between the derived position of the verb and the accusative argument, yield Case Adjacency.²⁷

I will not review the various proposals in detail. Rather, I present some of the most convincing arguments in favor of overt object shift. These facts establish that the object does indeed move from its base-position in English. Coupled with the observation that the verb is always realized to the left of the object, verb movement is also implicated. The arguments are most easily made for ECM subjects, but in some cases extend to matrix objects as well.

McCloskey (2000) provides an argument that ECM subjects raise into the matrix clause from the stranding of *all* that is available under *wh*-movement in West Ulster English. Consider the dichotomy in (71).

- (71) ***Q*-stranding in West Ulster English reveals overt object shift** (McCloskey 2000)
- a. Who did you expect your mother *all* to meet at the party?
 - b. *Who did you arrange for your mother *all* to meet at the party?

In (71a), *all* can be stranded to the right of the ECM subject. In (71b), *all* cannot be stranded in a similar position. Given that the infinitival subject in (71a) moves overtly to the higher clause, there is space for the quantifier to be stranded in a position preceding *to*. This is not the case with (71b), where the infinitival subject is case-marked within the infinitive.

Lasnik & Saito (1991) employ binding and NPI-licensing, both of which are commonly held to require particular c-command relationships, to demonstrate that ECM subjects raise into the matrix clause. In (72) and (73), the (a) examples illustrate that the subject of an embedded finite clause does not c-command matrix adjuncts. The (b) cases demonstrate that the object of a clause c-commands certain types of adjuncts within that clause. Given that the (c) sentences are judged better than the (a) sentences, they are taken to show that

²⁷ Taking a different approach, Richards (2014) suggests that Case Adjacency be subsumed on general adjacency requirements between heads related by AGREE – probe-goal contiguity. All things being equal a head desires to be grouped prosodically with the element(s) that it Agrees with. Case Adjacency then becomes an instance of a more general adjacency requirement. As noted in Chapter 4, it is unclear what if anything this adjacency relationship has to do with the Caseless adjacency relationship discussed in Chapters 3 and 4 above.

the subject of an embedded infinitival clause patterns with the matrix object and unlike the subject of an embedded finite clause; they occupy a position within the matrix clause.

(72) ***ECM subjects bind matrix reciprocals*** (Lasnik & Saito 1991)

- a. ?*The DA proved [that the defendants were guilty] during each other's trials.
- b. ?The DA accused the defendants during each other's trials.
- c. ?The DA proved [the defendants to be guilty] during each other's trials.

(73) ***ECM subjects license matrix NPIs*** (Lasnik & Saito 1991)

- a. ?*The DA proved [that none of the defendants were guilty] during any of the trials.
- b. The DA accused none of the defendants during any of the trials.
- c. ?The DA proved [none of the defendants to be guilty] during any of the trials.

This indicates that the ECM subject may raise to a matrix position from which it can c-command a matrix adjunct. If binding and NPI-licensing must be established within the narrow syntax (e.g. Chomsky 1981; Barss 1986; Saito 1989; Lasnik & Saito 1991, 1992), the above data can only be captured if ECM subjects undergo movement into the matrix clause in the syntax.

This conclusion is further supported by the observation that ECM subjects may occur to the left of certain matrix elements, including adverbials that unambiguously modify the matrix clause (74) and the particle of verb-particle predicates (75) (e.g. Postal 1974, Kayne 1985, Authier 1991, Johnson 1991, Bowers 1993, Koizumi 1995).

(74) ***ECM subjects appear to the left of matrix adverbials***

- a. I've believed John *for a long time now* to be a superhero.
- b. I have found Bob *recently* to be boring.
- c. We proved Smith *to the authorities* to be the supervillian.
- d. I proved him *conclusively* to be a superhero.
- e. I suspect him *strongly* to be a superhero.

(75) ***ECM subjects appear to the left of matrix particles***

- a. They're trying to make *out* that John is a thief.
- b. *They're trying to make that John *out* is a thief.
- c. ?They're trying to make *out* John to be a thief.
- d. They're trying to make John *out* to be a thief.

Since neither matrix adverbials nor the particle of a particle verb could be generated in the embedded clause, these examples strongly indicate that the ECM subject moves overtly into matrix clause. Note however that interpolation of the ECM subject is not required, as in (75c). This point will become relevant below.

Like ECM subjects, matrix objects can also be interpolated between the verb and particle of a particle-verb construction (76a,b). Furthermore, if the object is a pronoun, it must be interpolated (76c,d).²⁸

(76) ***Matrix objects appear to the left of matrix particles***

- a. Tammy looked *up* the number.
- b. Tammy looked the number *up*.
- c. *Susie threw *out* it.
- d. Susie threw it *out*.

Johnson (1991) takes this as evidence that English matrix objects, just like ECM subjects, undergo overt object shift.²⁹

The evidence presented above strongly suggests that objects and ECM subjects undergo overt movement in English. See Bošković (1997a,b), Lasnik (1999), and Boeckx & Hornstein (2005) for additional arguments. When coupled with verb movement, independently required to place the verb to the left of the moved object, and restrictions on the merger of adverbs Case Adjacency can be captured without appealing to restrictions on the Case assignment operation itself. This result is welcome in light of the cross-linguistic data that reveals the connection between accusative Case assignment and verb-adjacency appears to be a surface requirement of English, and does not reveal anything about the realization of (accusative) Case.

Of course, the facts still could receive a Case-theoretic explanation (e.g. Bošković 1997, 2002, 2007). Specifically, English object shift may be triggered for Case purposes.³⁰ However, additional facts about ECM subjects suggest against pursuing this view. Lasnik (1999, 2001, 2008, 2010) establishes that object shift of the accusative subject in ECM *is optional*, except in the case of weak pronouns.³¹ The arguments come from the further investigation of verb-particle constructions. I illustrate two of his arguments here.

In (77), only the subject-particle order allows the subject to c-command into matrix adjuncts. This suggests that in the opposite order, i.e. particle-subject, the subject remains within the embedded clause.

(77) ***ECM subject position affects binding***

- a. The DA made no suspect_i out to have been at the scene during his_i /any trial.
- b. The DA made out no suspect_i to have been at the scene (?*during his_i /any trial).

In (78), only the particle-subject order allows the subject to take scope below the embedded negation; the subject-particle order patterns with raising in blocking such an interpretation. This suggests that only in this

²⁸ Exceptions do exist. If the pronoun is focused or stressed, conjoined, or has deictic force, the otherwise unavailable particle-pronoun order is permitted (e.g. Bolinger 1971, Johnson 1991, Rezac 2013).

²⁹ A number of analyses (e.g. Ross 1967, Williams 1974, Zwicky 1986, Dowty 1995) hold that the need to interpolate weak pronouns is dictated by prosodic requirements.

³⁰ Object shift, as it is sensitive to factors such as definiteness/specificity, in other languages cannot be triggered by the need to assign Case (e.g. Diesing 1992).

³¹ See Chomsky (1995, 2004) for some objections.

latter scenario has the subject raised out of the embedded clause.

(78) *ECM subject position affects scope*

- a. The mathematician made every even number out not to be the sum of two primes.

[$\forall > \neg$; * $\neg > \forall$]

- b. The mathematician made out every even number not to be the sum of two primes.

[$\forall > \neg$; $\neg > \forall$]

To explain the dichotomy in (77), post-particle subjects must occupy a position within the embedded clause while pre-particle ones need not. To explain the dichotomy in (78), pre-particle subjects must occupy a position within the matrix clause, while post-particle ones need not. Lasnik (1999, 2001, 2008, 2010) concludes that ECM allows but does not require object shift. These facts dissociate Case and object shift. Just as arguments from Section 7.2.1 necessitated an EPP, independent of Case, for T^0 and C^0 . If these observations are correct, they cast doubt on Bošković's Case-driven movement account of object shift. Common analyses hold that ECM subjects always need Case, but (78) and (77) suggest that they do not always need to undergo movement.

Instead, Lasnik's observations can be understood in the AGREE framework if v^0 optionally enforces an EPP-requirement. When the requirement is enforced, the ECM subject moves into the matrix clause. When the requirement is not enforced, no movement occurs. One shortcoming of the optional movement approach is that it appears to predict that Case Adjacency should not be necessary in ECM subjects. Taken in total the facts discussed in this section may require the conclusion that Case Adjacency is a PF requirement (e.g. Neeleman 1994, 2002; Neeleman & Reinhart 1997; Neeleman & Weerman 1999; Alexiadou & Anagnostopoulou 2001; Ackema & Neeleman 2004); a position I return to in the next section. This position allows the subject to optionally raise into the matrix clause within the syntax, but can subsequently restrict the placement of adverbs to satisfy a PF adjacency requirement. Such a view is entirely compatible with the view of Case presented here. It does not enforce a requirement that KPs bearing [u Case] move to a certain position *within the narrow syntax* to be licensed.

7.2.2.3 *On the order of arguments*

Adopting an overt object shift analysis of English objects (and ECM subjects) provides an explanation for the observed restrictions on the order of arguments. Recall that for verbs in English that select more than one complement, the noun phrase, if there is one, must precede all other arguments (i.e. PP or CP) (79).

- (79) ***Noun phrase precede other arguments***
- a. Marge donated her allowance to charity.
 - b. *Marge donated to charity her allowance.
 - c. James believed it that the world is round.
 - d. *James believed that the world is round it.

There is no such ordering effects when the two complements are non-nominal. Multiple PP complements to a verb like *talk* can be freely ordered with respect to one another (80).

- (80) ***Multiple PP-complements to V⁰ can be ordered freely***
- a. Julia talked to Jillian's grandfather about Tommy.
 - b. Julia talked about Tommy to Jillian's grandfather.

Stowell (1981) argues that these facts can be captured by Case theory, as a special instance of the general requirement (in English) that the complement of a Case-assigner, P⁰ or V⁰, must be adjacent to its assigner. (79b,d) is ungrammatical, because Case Adjacency is not achieved. Multiple prepositional complements (80) can be freely ordered because neither is assigned Case, so that neither need obey Case Adjacency. Under an overt object shift account the facts can be captured as resulting from the fact that KP, but not PP or CP, must undergo object shift. This movement places KPs higher in the clause and closer to the verb.

7.2.3 Derived Object Condition predicates

Lastly, I consider a class of constructions that, like ECM predicates of the *believe*-class, embed nonfinite clauses that are not introduced by *for* – *wager*-class predicates and ECM+DOC predicates. These predicates are unique in that they require movement of the non-finite subject. As such they are termed ‘derived object condition’ predicates by Postal (1974, 1992). Strikingly, a non-natural class of movement operations license the embedded subjects in these constructions. In some analyses, the attested movement is held to arise for the purposes of Case-licensing, introducing another potential confound for theories of Case assignment, and feature-valuation more generally, which permit [*uF*]-valuation to fail.

Verbs like *wager* or *allege*, in (81), permit weak pronouns to be realized in the embedded clause. However, these verbs do not license full KPs as embedded subjects (81a). Interestingly, *wager*-class predicates permit movement of the embedded subject. Under both A-movement (81b), when the matrix predicate is passivized, and \bar{A} -movement (81c), when the embedded subject is questioned (or relativized), the subject is licensed (e.g. Postal 1972, Pesetsky 1992, Bošković 1997).

(81) ***‘Wager’-class predicates license full KPs under movement***

- a. You alleged them/*THEM/*the propositions to be false.
- b. The propositions were alleged to be false.
- c. What did you allege to be false.

Relatedly, the verb *show* participates in both ECM – *I showed Bill to be a fool* and the Double Object Construction (DOC) – *I showed Bill his report*, and may combine the two.³² However, the distribution of nominals within the resulting ECM+DOC construction is heavily constrained. It is ungrammatical for simple active (82) and passive (83) constructions (e.g. Kayne 1984, Pesetsky 1992, Postal 1993).

(82) ***ECM+DOC verbs do not license embedded subjects***

- a. *We showed the reader the propositions to be valid.
- b. *We showed few readers there to be any propositions in line with ours.
- c. *We showed her ’em/only them/them all/it and them to be valid.
- d. *I showed him there to be mice in the cellar.
- e. *I guarantee you it to be possible to revise the paper.

(83) ***Passivization does not license embedded subjects***

- a. *The reader was shown the propositions/’em/them all to be valid.
- b. *There were few readers shown any propositions to be in line with yours.

Embedded subjects are licensed when they undergo \bar{A} -movement (84) (e.g. Kayne 1984, Pesetsky 1992, Postal 1993, Rezac 2013). Furthermore, in both *wager*-class and ECM+DOC constructions, embedded subjects can be licensed by Heavy NP Shift (85).

(84) ***\bar{A} -movement licenses non-finite subjects under ECM+DOC verbs***

- a. What did the lawyer show the jury to be valid.
- b. the testimony that the lawyer showed the jury to be valid

(85) ***Heavy NP Shift in ‘wager’- and ECM+DOC-class verbs***

- a. John alleged to be a liar [that mean old lady who lived in the apartment below him].
- b. The lawyer showed the jury to be false [the testimony of the witness who quickly left town the next day].

Though he does not consider the case of Heavy NP Shift, Rezac (2013) suggests that these requirements be attributed to a need to value [*uCase*].³³ Rezac claims that the ungrammaticality of (82) and (83) is not

³² *Guarantee* and *grant* participate in *wager*-type ECM. *Assure*, *persuade*, and *convince* take ECM infinitives only with the DOC, and the DOC only with non-KP themes (Rezac 2013).

³³ Case-theoretic accounts of the ungrammaticality of ECM+DOC predicates in (82) and (83) are also presented by Pesetsky (1991)

due to *s/c*-selectional requirements, such as incompatibility of ECM and the DOC, because ECM and the DOC do combine in (84b) and (85b). Nor is it due syntactic requirements of the matrix clause; these should be satisfied the indirect object. Rather, he holds that the problem must be some need of the subject of the infinitive that the ECM+DOC construction, unlike plain ECM or DOC, does not meet. Rezac claims that need is Case. In the plain DOC, the direct object receives accusative case from the verb. Similarly, in plain ECM, the subject of the infinitive receives accusative or nominative Case depending on whether the matrix verb is active or passive voice. Rezac identifies the indirect object, since its presence is the difference between ECM and ECM+DOC, as the element that renders Case assignment to the embedded subject unavailable. The indirect object intervenes between matrix v^0 and the embedded subject, blocking Case-licensing.

Support for attributing the ungrammaticality of embedded subjects in ECM+DOC to the intervening indirect object is also found in the behavior of related constructions including a prepositional dative construction (Bowers 1993, Rezac 2013). Indirect objects introduced by PPs intervene linearly and hierarchically between the ECM verb and embedded infinitive. Nevertheless, in these environments embedded subjects appear to be licensed just as canonical ECM subjects.

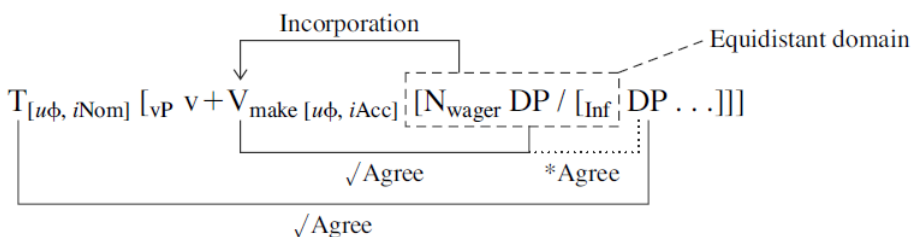
(86) ***Prepositional indirect objects do not block embedded subject licensing***

- a. We showed (*to the reader) few propositions (?to the reader) to be valid (to the reader).
- b. The lawyer showed (*to the jury) the documents (?to the jury) to be invalid (to the jury).

Embedded within a PP, the indirect object does not intervene for the purposes of Case-assignment, yielding grammaticality.

Rezac (2013) extends this analysis to the *wager*-class. He notes that verbs in the *wager*-class require their subjects be animate agents. Verbs in the *believe*-class do not. Rezac takes this difference to indicate that these predicates have additional structure (cf. Pesetsky 1992). Specifically, he holds that *wager* but not *believe* ECM verbs have N^0 visible to Agree, as in (87).

(87) ***Deriving ‘wager’-class verbs*** (Rezac 2013)



His analysis proceeds as follows: in (87), N^0 , like indirect objects in ECM+DOC constructions, intervenes, blocking Case-assignment from matrix v^0 to the embedded subject. However, N^0 incorporates into the verb (Baker 1988). This renders it invisible to higher probes. Therefore, passive T^0 can target the embedded

and Boeckx & Hornstein (2005).

subject. \bar{A} -movement yields Case-assignment in *wager*-class verbs in the same way as in ECM+DOC. [*u*Case] is valued for free under \bar{A} -movement (Kayne 1984; Ura 1993; Bošković 1997b, 2007).³⁴ Furthermore, Rezac (2013) holds that English weak pronouns can undergo a certain kind of short movement to a position above the incorporated N^0 , yielding successful Case-assignment. This may be akin to Mainland Scandinavian object shift (cf. Johnson 1991).

Of course, under the proposed Case Filter, explanations of this sort cannot be maintained. To reiterate, [*u*Case] can survive the derivation. Even if the indirect object in an ECM+DOC construction or the null N^0 in a *wager*-class predicate acts as an intervener, a Case Filter violation should not occur. In order to maintain the proposed Case Filter, the behavior of infinitival subjects under verbs in these classes must be captured by a requirement that they move, not a requirement to receive Case. To my knowledge, two analyses to this end have been provided in the literature. Moulton (2007) offers a semantic account of the movement requirement. The clauses subordinated by the derived object condition predicates cannot compose when the subject remains *in situ*. In order for to avoid a type-mismatch movement, of any kind, must occur. Richards (2014) offers a PF account of the data. In general, heads desire to be pronounced adjacent to the head of the element they select. This can be achieved if intervening elements undergo movement out of the way. This is just what occurs in derived object condition predicates.

Below, I present a third possibility for capturing these constructions without appealing to Case. However, I wish to stress here that much future work is needed to determine if these or other possible analyses which seek to explain the obligatory movement requirement described above in non-Case-theoretic terms are tenable.

7.2.3.1 PF Adjacency and the derived object condition

One possible explanation for the behavior of *wager*-class and ECM+DOC predicates is to take seriously the idea, introduced in the Section 7.2.2, that there is a PF adjacency requirement on accusative Case realization (e.g. Neeleman & Reinhart 1997; Alexiadou & Anagnostopoulou 2001; Neeleman 2002; Ackema & Neeleman 2004). This position allows us to understand why ECM subjects appear to not need to undergo movement into the matrix clause (Lasnik 1999, 2001b, 2008, 2010), but must be realized to the left of matrix-level adverbs.

Recall that only the subject-particle order in (88) allows the subject to c-command into matrix adjuncts, indicating that in opposite order the subject remains in the infinitive.

(88) ***ECM subject position affects binding***

- a. The DA made no suspect_i out to have been at the scene during his_i /any trial.
- b. The DA made out no suspect_i to have been at the scene (?*during his_i /any trial).

³⁴ Similar arguments for object Case-assignment through \bar{A} -movement have been made for French (Kayne 1984), Hungarian (Kiss 1987, Lipták 1998, Gervain 2002, Coppock 2004, Den Dikken 2006, 2009), Norwegian (Taraldsen 1981), and Passamaquoddy (Bruening 2001). Though see Den Dikken (2012) for an alternative analysis of the Hungarian data.

Furthermore, in (89), only the particle-subject order allows the subject to take scope below the embedded negation; the subject-particle order patterns with raising in blocking it, suggesting that only in this case has the subject raised out of the infinitive.

(89) *ECM subject position affects scope*

- a. The mathematician made every even number out not to be the sum of two primes.
[$\forall > \neg$; $*\neg > \forall$]
- b. The mathematician made out every even number not to be the sum of two primes.
[$\forall > \neg$; $\neg > \forall$]

Example (88) requires post-particle subjects to be located in the infinitive; (89) requires pre-particle subjects to have raised out of the infinitive. Given this dichotomy, Lasnik (1999, 2001, 2008, 2010) concludes that ECM allows, but does not require, object shift. Note that this position is incompatible with Richards' (2014) account that predicts that overt infinitival subjects must always vacate the embedded clause. On the surface, this conclusion is at odds with the equally strong observation that ECM subjects be realized to the left of matrix level adverbs, (90).

(90) *ECM subjects show Case Adjacency*

- a. John believed (*wholeheartedly) Mary (wholeheartedly) to be a liar.
- b. John showed (*without a shadow of a doubt) Mary (without a shadow of a doubt) to be qualified.

The requirement that the ECM subject appear to the left of matrix adverbs appears to indicate that movement into the matrix clause is obligatory. However, the two data points can be reconciled if movement into the matrix clause is optional, but verb-adjacency is obligatory for *morphological* requirements. When no matrix-level adverb intervenes, the subject can be realized either in the matrix or embedded clause. Either position will be linearly adjacent to the verb. However, only the position to the left of matrix-level adverbs satisfies this adjacency requirement in (90).

The ungrammaticality of embedded infinitival subjects in ECM+DOC and *wager*-class predicates may be attributed to a violation of linear adjacency on accusative case. On this view, all of the sentences below are ungrammatical for the same reason.

(91) *Embedded subjects and adjacency*

- a. *John believed **wholeheartedly** Mary to be a liar.
- b. *We showed **to the reader** few propositions to be consistent.
- c. *The lawyered showed **the jury** the documents to be fraudulent.
- d. *Bill wagered \emptyset Sue to be happy.

In each of the examples above, ungrammaticality can be attributed to a PF requirement for accusative case adjacency. The embedded subject in each case is not linearly adjacent to the verb. Adjacency is disrupted by a matrix adverb in (91a), the prepositional indirect object in (91b), the nominal indirect object in (91c), and the null argument, proposed by Rezac (2013) and repeated above, in (91d). In each instance, ungrammaticality does not arise due to a failure to value [u Case] on the direct object. Rather, ungrammaticality arises because the ECM subject, which receives dependent accusative Case via the local c-command relationship with the matrix subject is not realized in a case-adjacent position. The PF requirement on case adjacency is not met, yielding ill-formedness.

The possible strategies to remedy the adjacency violation can be constrained by the verb in question. In a canonical ECM verb like *believe* in (91a) and even *show* in (91b), there is a position within the matrix XP that contains the verb, but crucially below the final position of the verb to which the subject can move. Such movement can be enforced by an (optional) EPP requirement on the relevant functional head. Such optionality captures Lasnik's observations described above. However, when EPP-effect is not enforced ungrammaticality will arise.

Movement of the embedded subject to a position within the matrix clause, but below the matrix verb is unavailable in (91c), because, as Rezac (2013) correctly observes, the indirect object is an intervener. It blocks probing of EPP features both within the verbal domain and also by T^0 , ruling out passives as well. A distinction must be drawn between ECM+DOC verbs and canonical DOC verbs. The latter permit the direct object to be separated from the verb by the indirect object while the former do not. I agree with Rezac (2013) that the distinction comes from selection. DOC predicates select both arguments. ECM+DOC predicates do not. Assuming a Larsonian (1988) VP shell structure, the verb will be adjacent to the direct object upon selection. After verb-movement higher in the clause it will be adjacent to the indirect object, satisfying adjacency requirements on both arguments at PF (cf. Neeleman & Reinhart 1997, Neeleman & Weerman 1999). Being adjacent to the trace of the verb is apparently enough for the direct object in a DOC environment. Sensitivity to unpronounced elements is also observed in (92).

(92) *Traces intervene*

- a. *Bill_i was assured t_i Mary to be a winner.
- b. *Tom_i was guaranteed t_i Sue to be the worst.

Passivization of the indirect object renders the matrix verb string-adjacent to the embedded subject, yet ungrammaticality persists. On the present account, such movement is not sufficient to render the embedded subject adjacent to the matrix verb; the trace of the passivized argument must be understood to still intervene, maintaining ungrammaticality despite surface adjacency.

These facts indicate that this adjacency requirement is distinct from Caseless adjacency requirements which are determined later in the derivation where traces are irrelevant.³⁵ *Wh*-movement of the object is

³⁵ If adjacency to the verb is sufficient to satisfy PF adjacency, it is not immediately clear why sentences like *John learned quickly

well-formed, because a *wh*-probe is able to bypass non-*wh*-elements that intervene structurally between the probe and the goal. Of course, an independent explanation is needed to understand why *wh*-movement obviates the PF adjacency requirement. Even simplex *wh*-object questions are well-formed when no adjacency relationship is maintained. A similar explanation is required for Heavy NP shift.

Finally, consider *wager*-class predicates. Following Rezac (2013), I hold that there is a nominal element N^0 as a lexical parameter. However, this argument is *not* visible to AGREE, at least for the relevant probes. Rather, its presence is enough to disrupt the PF adjacency requirement on accusative case realization, triggering ungrammaticality of the embedded subject if it remains *in situ*. However, because the null N^0 , unlike the indirect object of an ECM+DOC construction, is not an intervener for AGREE, EPP-probing by T^0 in the case of passives is well-formed.³⁶ If the null N^0 element is not an intervener for AGREE, we must account for the ungrammaticality of object shift in a different manner. Presumably an EPP-feature in the extended verbal projection should be able to target the embedded subject, much like in canonical ECM predicates. Here I follow Pesetsky (1992) and Richards (2014) in maintaining that *wager*-class predicates differ from *believe*-class predicates in that they have a distinct clausal structure.

Verbs in the *wager*-class invariably require their subjects to be animate agents, while verbs in the *believe*-class do not (Pesetsky 1992). There are some verbs which can be used either agentively or not, and which behave like *wager* when agentive and like *believe* verbs when not.

(93) **‘Wager’-verbs require animate, agentive subjects**

- a. Sue ultimately understood John to have died only after we had explained it to her many times.
- b. ??No, you can’t talk to John. Try to understand him to have died.
- c. No, you can’t talk to John. Try to understand that he has died.

Just in contexts like the one in (93b) that encourage an agentive reading, *understand* acts like a *wager*-class verb; it cannot participate in ECM. (93c) shows that *understand* can have the relevant reading, in principle, when ECM is not at issue. Pesetsky’s observation suggests that ECM and agentive subjects may both implicate the same structural position, with the consequence that they are in complementary distribution. Richards (2014) suggests that the subject of *wager*, being an Agent, is introduced in the specifier of νP ; the Experiencer subject of *believe*, by contrast, is introduced in the specifier of a higher functional head. If this analysis is correct, we might seize upon the structural difference to make sense of why infinitival subjects embedded under ECM predicates cannot undergo object shift to a position above null N^0 but below the verb. There is not enough syntactic architecture to host such movement. By extension there is no projection to host the requisite EPP-feature to trigger the proposed movement. There may still be enough architecture

french are ungrammatical. Such a sentence could be achieved by verb-movement without accompanying object shift. Presumably, the object is adjacent to the lower copy of the verb, satisfying its adjacency requirement. The ungrammaticality of such examples may indicate that unlike ECM predicates, object shift of direct objects is not optional.

³⁶ However, see Moulton (2009) for an objection to the treatment of passivized *wager* predicates as verbal passives. Rather, he suggests they are adjectival passives.

to host the movement of weak pronouns (cf. Johnson 1991) which are licit in both ECM+DOC and *wager* contexts. Again, like *wh*-movement, a PF adjacency account must permit Heavy NP Shift to override the adjacency requirement.

The obligatory movement of infinitival subjects has commonly been held to be driven by a licensing requirement of the moving nominals, perhaps the need for Case. The explanation offered here does not have this property; subjects of infinitives must move because they are in a position which interrupts the morphophonological process of case realization. ECM+DOC and *wager* contexts, as well as canonical ECM environments which do not respect morphological case adjacency are all ungrammatical, because the PF requirements of morphological case are not met, resulting in amelioration by a non-natural class of operations including both A- and \bar{A} -movement, Heavy NP shift, and weak pronoun movement. A benefit of the present analysis is that the account is consistent with infinitives being like any other clause with respect to Case assignment. However, the analysis presented here is somewhat rough, additional work must be done to understand some of the details of a PF adjacency requirement. I have attempted to indicate above where such work is needed. As noted, other analyses share the property of requiring movement in the derived object condition predicates. These analyses may also be viable for explaining the distribution of KPs in such environments without appealing to Case.

7.3 Conclusion

In this chapter, I returned to examine a number of well-known phenomena that have received Case-theoretic explanations. As noted at the outset, adopting the view that [*u*Case] can survive the derivation, we must shift the explanatory power of analyses that relied on Case-valuation to another factor. For instance, A-movement was attributed to the EPP and conditions on expletive-associate relationships, while the distribution of non-finite subjects was captured by conditions on case realization and the distribution of *for*. In many cases, arguments against the classic Case-theoretic account have been offered in the literature, though in some instances I have offered novel arguments, as well.

There are, of course, many more phenomena that have received Case-theoretic proposals than could be reviewed here. It is my hope that these phenomena too may be able to be understood in a different light, and that some of the possible alternative explanations offered for the phenomena at issue in this chapter may be extended to subsequent environments in the future.

Chapter 8

Conclusion: Why is there C/case?

In this dissertation, I have argued widely accepted proposals concerning the nature of nominal licensing and its relation to nominal morphology are incorrect. In particular, nominal licensing is not a result of Case-feature valuation as has been maintained since (at least) Chomsky (2000, 2001). Instead, I have argued for (1).

- (1) *Core components of Case Theory*
 - a. *Noun Phrase Licensing*
Noun phrases must be KPs.
 - b. *Noun Phrase morphology*
[*uCase*]-valuation influences case morphology.

Only nominal morphology is concerned with Case-feature valuation. Nominal licensing is sensitive to nominal size. K^0 is the counterpart in this theory of abstract Case, the syntactic property of noun phrases that accounts for those aspects of their distribution and form that do not follow from their morphophonological or semantic content. Nominals that are full KPs are well-formed wherever external and internal merge dictate they be realized, but those nominals that lack Case (i.e. K^0) have constrained distributions, because these arguments must be alternatively licensed.

I began the argument for this proposal with the observation that, in general, unvalued features, [*uF*], can survive the derivation. The presence of [*uF*] at the interfaces does not cause syntactic derivations to crash (Preminger 2011, 2014). Arguing in Chapter 2 that Case-assignment is best modeled as a syntax-internal feature-valuation operation, I concluded that [*uCase*] can survive the derivation. The form of Voice morphology in Formosan restructuring clauses provided a principal argument for this conclusion. If this conclusion is correct, the common Case Filter (2) cannot be maintained.

(2) ***Common Case Filter***

*[Noun Phrase _[uCase]]

Following a number of proposals that have sought to remove Case-assignment from syntax entirely (e.g. Marantz 1991/2000, McFadden 2004, Bobaljik 2008, Sigurðsson 2009), I maintain that the distribution of nominals bearing [_{uCase}] is not due to any need to value [_{uCase}]. In Chapters 6 and 7, I offered alternative means of restricting the distribution of nominals in a number of environments which have often received Case-theoretic explanations.

Nevertheless, I have not argued against the general need for a Case theory governing the distribution of nominals. Instead, I argued that the Case Filter should be understood as a constraint on nominals which lack [_{uCase}] altogether, regardless of its valuation, as in (3).

(3) ***Proposed Case Filter***

Noun Phrases must be KPs.

In Chapters 3-5, I examined structurally reduced nominals, incapable of hosting [_{uCase}]. I showed that in the absence of [_{uCase}], nominals display unique distributional requirements. These requirements are indicative of an alternative licensing strategy that satisfies (3).

Chapter 3 identified two environments in which nominals display unique distributional constraints – the objects of pseudo noun incorporation (PNI) constructions and *in situ* subjects in Balinese and Malagasy, which are demonstrably smaller than KP. Both display a strict linear head-head adjacency requirement with the verb. Whenever elements intervene between the nominal and the verb, or the requisite adjacency relationship is broken by subsequent movement operations, ungrammaticality arises. This similarity motivates a uniform analysis of both classes of nominals as being smaller than KP. All differences between the two environments fall out from independent differences in how the distribution of these arguments arises.

In Chapter 4, I presented an analysis of this head-head adjacency requirement as a means of licensing nominals that are not full KPs. Nominals without [_{uCase}] cannot satisfy the Case Filter. In order to realize such arguments, they can be licensed via adjunction to the verb. Such adjunction was suggested to be achieved under Local Dislocation, a PF operation which operates on linearly ordered strings. Phenomena commonly explained via Local Dislocation are also sensitive to strict linear order. As such, it seems natural to extend the mechanism to capture the behavior of Caseless arguments. The notion that adjunction can serve as an alternative to Case licensing is not new. Baker (1988) argues that Noun Incorporation also involves adjunction of a nominal to a verb, creating a head-head adjacency configuration, and simultaneously obviating the Case Filter *within the syntax*. However, the arguments which can be licensed by adjunction under Local Dislocation and the set of intervening elements to which the operation is sensitive are distinct from what one finds in Noun Incorporation constructions. Unlike morphological Noun Incorporation, external arguments can be licensed under Local Dislocation. Furthermore, elements that are not heads still disrupt adjacency.

Adjectives which can be stranded by morphological Noun Incorporation cannot be stranded when licensing is achieved via Local Dislocation. And elements that are structurally subordinate, but linearly precedent, can also intervene, suggesting that linear order is truly at play. The facts then suggest that multiple adjunction strategies are available in the grammar and that (any of) these strategies may be used for the express purpose of adjoining a nominal element to a verbal element in order to licensing the nominal in the absence of K^0 .

In Chapter 5, I argued for a second alternative licensing strategy: the insertion of K^0 . I observed that PNI and antipassive (AP) constructions display a number of shared syntactic and semantic alternations when compared to their corresponding transitive counterparts. All these alternations can be attributed to the merger of a structurally reduced object in place of a full KP. I suggested that the similarities between PNI and AP be captured by modeling AP constructions as merger of a structurally reduced nominal as well. Nevertheless, in order to satisfy the proposed Case Filter, AP objects, like PNI objects, must be alternatively licensed. I suggested that the two constructions – PNI and AP – can be understood to vary in how they license their structurally reduced objects. PNI objects are licensed under linear adjunction. AP objects are licensed when inherently valued K^0 is added to the structurally reduced nominal. The addition of K^0 , yields a KP and satisfies the proposed Case Filter.

The need to alternatively license nominals that do not have Case suggests that the proposed Case Filter is real, and that licensing without Case is possible. I demonstrated that the distribution of structurally reduced nominals cannot easily be constrained by their semantics, nominal size, or prosodic requirements alone. Case then may be seen as responsible for determining the distribution of nominals. Specifically, nominals that contain K^0 and thus enter the derivation with $[(u)Case]$ have a different distribution and form than nominals which do not. The lack of a K^0 affects the distribution of both the nominal in the clause and, in the scenario of licensing under Local Dislocation, the distribution of elements within the nominal.

Nevertheless, Case-features also exist. I demonstrated in Chapter 6 that morphological case assignment is syntax-internal. If syntax-internal operations can be generally modeled as feature-valuation operations (e.g. Chomsky 1995, 2000, 2001), then case assignment should be modeled in the same fashion.

As Chapter 7 indicated, the proposed model does not lead to overgeneration of nominals. Adopting specific constraints on the positions in which nominals can be base-generated and other constraints on the positions to which nominals can move limits the number of nominals that can enter a well-formed derivation, and provides an alternative explanation for many phenomena previously accorded Case-theoretic accounts.

Of course, there are many questions that must still be answered, and I have tried to highlight these open questions whenever they became relevant above. I would like, however, to conclude by exploring one open question in some detail: Why should there be *C/case* at all?

8.1 Previous answers

Investigating patterns and theories of *C/case* as well as the existence of abstract Case and its possible mappings to morphological case has been the goal of much research. However, far fewer attempts have been

made to address why *C*/case should exist at all. In general, these proposals have sought to connect Case Theory to more general linguistic properties. To some extent these proposals fail in their ultimate goal, because the connections they identify must be stipulated. However, if the proposed connections between *C*/case and other aspects of language are real, these proposals would, indeed, constitute progress towards explaining the need for and/or function of *C*/case. Of course, the problem of answering the question of why *C*/case should exist is complicated by the conclusion reached in this dissertation that the two are less tightly linked than previously thought. On the common analysis that abstract Case and morphological case are reflexes of Case-feature valuation, a uniform answer can be provided for why *C*/case exists. However, if the two are separated we may find independent motivations for why Case and case exist. In this section, I review the answers provided in previous work, noting how the data considered in the preceding chapters informs these positions.

8.1.1 The Visibility Hypothesis

As mentioned in brief in Chapter 4, an early speculation on the question of why Case should exist is presented by Chomsky (1981), following a suggestion of Aoun (1979). Chomsky suggests that Case is a precondition for a nominal to be interpreted at LF. This requirement is often termed the *Visibility Hypothesis*. The θ -criterion Chomsky (1981) of the principle of Full Interpretation (Chomsky 1986a), rules those constructions that contain nominals that fail to receive a thematic interpretation ungrammatical. Thus, the common Case Filter, on this view, arises due to general principles that require all components of a well-formed syntactic derivation to be ‘legible’ at the interface with semantics. Even appealing to such a principle, the link between Case and legibility must be stipulated. Additionally, the Visibility Hypothesis has nothing to say regarding the fact that CPs and PPs are interpreted without Case.¹

For a Visibility Hypothesis account to be maintained within a system that tolerates [*u*Case] at the interfaces, we must understand the Case Filter to rule out those nominals which lack Case altogether, regardless of its valuation, as being illegible. Problematic for this view is the observation noted in Chapters 3 and 4 that the alternative licensing strategy of Local Dislocation is employed at PF. As I have repeatedly stressed above, Local Dislocation is sensitive to strict linear order. Elements that happen to be realized linearly between the verbal head and the highest overt head of the extended projection of the Caseless nominal, regardless of their hierarchical position in the syntactic structure, yield ungrammatical strings. Head-head adjacency must be checked after linear order is established. Under common assumptions, linear order is only established post-syntactically. As concluded in Chapter 4, the proposed Case Filter must be operative at PF or within the narrow syntax, but crucially not at LF. Given this, any attempt to reconcile Case, either its valuation or simply its presence, to LF-legibility seems untenable. For the purposes of syntax and semantics structurally reduced nominals are not KPs, they do not bear Case, only at PF do they satisfy the Case Filter either through adjunction or the addition of K^0 . In the instances of PNI objects and Caseless *in situ* subjects,

¹ See Chomsky (1981) for a discussion of the problem posed by CPs.

the semantics is fed a derivation in which the Case Filter has not been satisfied, yet uninterpretability and ungrammaticality do not immediately arise. If the Case Filter is checked at PF the derivation can converge. Therefore, any attempt to link the existence of C/case to LF-requirements seems implausible.

8.1.2 Case and AGREE

As noted at the outset, with the advent of the AGREE framework of Chomsky (2000, 2001) many phenomena previously attributed to Case assignment rules and the Case Filter have received new accounts. The distribution of nominals is by and large no longer held to be conditioned by the needs of nominals to receive Case, but rather by the needs of functional heads to value their own [uF]. Of course, most proposals within the AGREE framework still hold that [$uCase$] must be valued, but this proposal is just a subcase of the more general requirement that all instances of [uF] be valued. Furthermore, if [$uCase$] can be valued *in situ*, as assumed in Chapter 2 and argued for in Chapter 7, movement cannot be driven by [$uCase$]. One speculation then is that Case, now incorporated into the more general system of unvalued features, allows for the proper working of the AGREE system (Chomsky 2008). [$uCase$] serves to indicate which nominals are ‘Active’, i.e. viable goals for probing.²

Having observed, in Chapter 6, that morphological case may be relevant for other operations triggered by AGREE even if it is not (for the most part) assigned under the AGREE model. It seems reasonable to maintain with Chomsky that morphological case exists, at least in part, to ensure the proper workings of AGREE. However, divorcing abstract Case from Case-features entirely, this answer only serves to explain why a functional head might bear a Case-feature, not why certain functional heads, namely K^0 , are (often) needed in well-formed derivations.

8.2 The Case Filter and extended projections

The most fruitful line to pursue, in my mind, for explaining why abstract Case exists is to link the ungrammaticality of nominals which lack K^0 to a more general requirement that restricts the distribution of structurally reduced constituents. This position was discussed in Chapter 4. The proposed Case Filter, repeated again in (4), is a constraint banning nominals that lack K^0 .

(4) ***Proposed Case Filter***

Noun Phrases must be KPs.

As discussed in Chapter 4, a requirement like (4) can be seen as a subcase of a more general requirement that all extended projections be complete extended projections. KP is one member of the set of complete extended projections that also includes PP, CP, and possibly others (cf. Sheehan & Van der Wal 2015).

² See Chapter 2 for citations which claim that the Activity Condition is untenable cross-linguistically.

In the same way that, despite empirical shortcomings, the common Case Filter could be viewed as a subcase of a requirement that [μ F] of all kinds be valued. The proposed Case Filter can be viewed as a subcase of the requirement that all projections be complete. Abstract Case is required because nominal projections must be complete. Such a requirement has analogous consequences in non-nominal domains. All projections that are smaller than complete projections, not just KP-less nominals, should be subject to the same requirement. This restriction can serve to explain why the distribution of structurally reduced clausal elements like TPs in English which, unlike CPs, cannot occupy subject position and restructuring infinitives that are either VP or v P cross-linguistically (e.g. Wurmbrand 2001 *et seq.*) have a more limited distribution. In fact, Wurmbrand (2015) suggests that a crucial derivational ingredient in the formation of restructuring infinitives is the Head Movement of the embedded v^0 into the matrix verb, possibly extending the embedded v P projection.

Of course, much work is needed to produce an adequate theory of extended projection before the proposed Case Filter can be wholly subsumed by it. Even then, adopting the more general condition that all extended projections be complete forces us to consider why that requirement should exist. Questions like this and many others must be left to future investigation.

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