

Dependent case without case: Evidence from the Yimas clitic system*


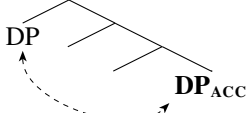
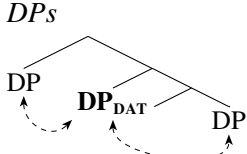
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Baker (2015) suggests that the dependent theory of case assignment (Yip et al., 1987; Marantz, 1991, et seq.) is essentially a formulation of the idea that morphological case functions to differentiate nominals. This paper provides novel evidence for this claim from the clitic system of Yimas (Lower Sepik; Papua New Guinea). In Yimas, grammatical relations are encoded on a series of optionally doubled clitics; the DPs they double are morphologically unmarked. Crucially, the morphological form of a given clitic covaries with the total number of clitics present, even when the sentence-level syntax is held constant: how a clitic is ultimately realized is thus dependent on its clitic environment. I argue that this context-dependence is underlyingly a dissimilation process, which is triggered whenever the structure would otherwise contain multiple morphosyntactically indistinguishable clitics; this arises whenever multiple DPs are clitic doubled. The link to dependent case comes from the parallel between the distribution of clitic forms and that of dependent case on nominals, in that both are controlled by morphosyntactic context, albeit in different structural domains.

1 Introduction

According to the theory of dependent case developed in Yip et al. (1987), Bittner and Hale (1996), and especially Marantz (1991), morphological case assignment is determined by a nominal's structural position relative to other nominals, rather than relative to a functional head. As schematized throughout (1), this system takes ergative case to be assigned to the higher of two arguments within some local domain of case assignment, and accusative case to be assigned to the lower of two such arguments. Additionally, it has been proposed that dative case is also dependent, assigned to the intermediate of three DPs (Harley, 1995; Podobryaev, 2013).¹

- (1) a. ERG assigned to higher of two DPs
- 
- b. ACC assigned to lower of two DPs
- 
- c. DAT assigned to intermediate of three DPs
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Dependent case theory is motivated by the following observations: (i) the realization of certain morphological cases on a syntactic argument seems to be possible only in the presence of other arguments in the syntax, and (ii) often (though not always), given two arguments within a domain of case assignment, one

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¹Others have also proposed that DAT case is dependent, but not assigned to a syntactically intermediate argument. For example, Baker and Vinokurova (2010) propose that dependent DAT is assigned to the higher of two arguments within a VP phase.

argument is morphologically ‘marked’ while the other is unmarked. Since dependent case assignment only references c-command relations between arguments, the distribution of dependent case is determined solely by morphosyntactic context, independent of the presence of certain functional heads that have case-assigning capabilities in other theories of case (e.g. Chomsky, 1981, 1995, et seq.).

This paper provides novel support for dependent case theory, but also argues for a reinterpretation of the logic behind the theory, on the basis of a new analysis of the clitic system of Yimas, a Papua New Guinean language from the Lower Sepik language family. Yimas provides a unique window into the nature of dependent case, because the types of grammatical relations that are encoded with nominal case in more familiar languages are not encoded on nominals in Yimas, but rather on a series of optionally doubled clitics. Crucially, the morphological form of a clitic *varies with the total number of clitics*, even when the sentence-level syntax is held constant. An illustration is given in (2):

(2) *Morphological alternations on Yimas clitics*

- a. tpuk **ka-ka-na-tmi-am-nt-akn**
 sago pancake.X **X.SG.A-1SG.B-DEF-CAUS-eat-PRES-3SG.C**
 ‘I made him eat a sago pancake.’ (F292)
- b. irwa ŋaykum **na-mpu-tmi-ampa-t**
 mat.IX.SG woman **3SG.A-3PL.B-CAUS-weave-PERF**
 ‘The women got her to weave a mat.’ (F292)

In both (2a-b), there are three arguments associated with the verb—subject, causee, and direct object. However, in (2a) there are three clitics on the verb, while in (2b) there are two. Crucially, we find that the total number of clitics matters in determining the surface form of a given clitic: the clitic cross-referencing the 3SG causee is realized with the form *-akn* in (2a) but is realized as *na-* in (2b). In other words, the morphological form of a given clitic is dependent on the presence of other clitics in the same clitic sequence.

I argue that this is in essence a *dependent case pattern* within a clitic complex. Indeed, compare the clitic alternations in Yimas with clause-level dependent case alternations in Alutor (Chukotko-Kamchatkan). As shown below, noun incorporation of a direct object into the verb results in the indirect object surfacing with ABS case (3b) rather than DAT case (3a) (Podobryaev, 2013). Thus, both the clitic forms in Yimas and the case patterns on nominals in Alutor display a sensitivity to morphosyntactic context in similar ways. That we find the same effects cross-cutting different structural domains strongly suggests the existence of a broader linguistic principle that underlies—and unifies—both systems.

(3) *Alutor: DAT case on causee unavailable when DO is incorporated*

- a. gəm-nan akka-ŋ tə-nə-svitku-və-tk-ən utte-ʔut
 1SG-ERG son-DAT 1SG.A-CAUS-cut-SUFF-PRES-3SG.P wood-ABS
 ‘I am making the son cut wood.’
- b. gəm-nan akək tə-n-u-svitku-və-tk-ən
 1SG-ERG son-ABS 1SG.A-CAUS-wood-cut-SUFF-PRES-3SG.P
 ‘I am making the son cut wood.’
 (Podobryaev 2013, citing Koptjevskaja-Tamm and Muravyova 1993)

Although the dependent theory of case has been supported by much recent research,² what remains generally unexplored concerns *why* languages make use of such a system. As far as I am aware, the only explicit suggestion has been offered by Baker (2015), who describes the theory of dependent case as a generative sharpening of the functionalist idea that morphological case exists primarily to distinguish between nominals (cf. Comrie, 1978; Haspelmath, 2008). Differentiation presupposes *multiple* objects that are otherwise similar; hence, dependent case assignment to a nominal requires referencing other

²See McFadden (2004), Bobaljik (2008), Podobryaev (2013), Poole (2015), Preminger (2011, 2014), Levin and Preminger (2015) for recent applications of dependent case theory to a wide range of cross-linguistic case patterns.

nominals in its syntactic environment. Moreover, dependent case theory provides a reason for why it is typologically common for case systems to morphologically mark *either* the subject or the object (e.g. ERG, ACC), leaving the other argument morphologically unmarked (ABS, NOM). Successfully differentiating between two nominals only requires marking one of them.

Building on Baker's discussion of dependent case as well as recent work on morphosyntactic distinctness (e.g. Richards, 2010), I argue that both the morphological alternations on the Yimas clitics and dependent case on nominals are fundamentally subtypes of a much broader phenomenon, namely *dissimilation*. The need to dissimilate comes from a universal well-formedness condition requiring that all elements within some local domain be featurally distinct from one another (Richards, 2010). Once again, Yimas provides the core evidence for this dissimilation-based treatment. As I will demonstrate, the morphological alternations on the clitics surface in order to avoid sequences of otherwise invariant clitics, a problem that in turn arises from the morphological invariance of the DPs they double. The parallels between the Yimas clitic system and the dependent case systems of other languages reveal that dependent case should be similarly reformulated as a way of differentiating nominals. Therefore, what we call 'dependent case' is dissimilation applied to nominals at the sentence level, whereas in Yimas the relevant domain of dissimilation is the clitic complex.

This paper is organized as follows. §2 starts by providing some basics of the Yimas clitic system, as well as my assumptions about the morphosyntax of the language. §3 details the morphological alternations on the clitics. §4 presents a full analysis of these alternations. §5 relates the behaviour of the Yimas clitic system to the dependent case system of Marantz (1991) and others, and shows that the same kinds of alternations are found cross-linguistically on nominals. Finally, §6 argues for a unified dissimilation-based account of both systems.

2 Yimas morphosyntax

This section introduces some necessary background on the Yimas clitic morphology and makes explicit some theoretical assumptions that I adopt throughout the paper. All of the Yimas examples presented in this paper come from William Foley's (1991) grammar of Yimas or personal communication with the author.³ The data in the grammar are based on extensive fieldwork that Foley conducted between 1977 and 1988. In what follows, however, I will take a very different perspective of the data than Foley does in his grammar.

2.1 Basics of the clitic system

Yimas is highly morphologically complex, especially in its verbal system. Morpheme order within the verb is rigid and propositional content may be expressed with verbs alone, while word order at the sentence level is much freer. In this respect, Yimas has properties that are fairly typical of polysynthetic languages. As mentioned above, grammatical relations are generally encoded directly on the verb as cross-referencing morphology, rather than on the nominals they cross-reference (which are generally morphologically invariant and occur in relatively free word order). Throughout this paper, I assume that the cross-referencing morphemes are doubled clitics (see §2.2). The clitics may be organized into the three paradigms given in (4):⁴

³The citation convention I will use throughout this paper is as follows: (F[pg.#]), or (F,p.c.).

⁴Other work has proposed different patterns of organization for the forms. For example, Phillips (1993, 1995) takes there to be five paradigms, which he does by separating the local and non-local persons in set A and set B into two distinct paradigms each. Conversely, Wunderlich (2001) also separates local and non-local persons, but assumes four paradigms in total.

(4) *Clitic paradigms—human referents:*

	Set A	Set B	Set C
1sg	ama-	ka-	ŋa-
1dl	kapa-	ŋkra-	ŋkra-
1pl	ipa-	kay-	kra-
2sg	ma-	n-	nan-
2dl	kapwa-	ŋkran-	ŋkul-
2pl	ipwa-	nan-	kul-
3sg	na-	n-	-(n)akn
3dl	impa-	mpi-	-mpn
3pl	pu-	mpu-	-mpun

The three paradigms, A, B, and C, loosely track grammatical function. Each cell encodes both person (1/2/3) and number (SG/DL/PL) of the nominal being cross-referenced.⁵ While the analyses pursued in Phillips (1993, 1995) and Wunderlich (2001) take these paradigms to make distinctions for morphological case, I instead opt to use the theory-neutral terminology from Gluckman (2014). The choice to use this terminology, rather than directly labelling the paradigms as different cases, is largely expository, as it helps drive home the point of this paper that dissimilation is a *general response* to the well-formedness condition mentioned in the introduction. Dissimilation may apply to nominals—which we interpret as dependently-assigned morphological case—or on clitics, as we see in Yimas, resulting in paradigmatic alternations.

Nonetheless, the paradigm sets A, B, and C are strongly reminiscent of absolutive, ergative, and dative case. In examples like (5a-c), for instance, set A clitics cross-reference objects and intransitive subjects (\approx ABS), set B clitics cross-reference transitive subjects (\approx ERG), and set C clitics cross-reference indirect objects (\approx DAT). These examples also demonstrate that the clitics always follow a linear A-B-C order, regardless of the number of clitics actually present or the position of the set C clitic, which may be prefixal or suffixal depending on its person specification. The set A clitic paradigm moreover differentiates among several other noun classes for non-human referents, which include animals, objects, and clausal complements.⁶

(5) *Clitic forms track grammatical function*

- a. **pu-wa-t**
3PL.A-go-PERF
 ‘They went.’ (F195)

⁵Yimas also has paucal number, which may be morphologically realized differently from the other number specifications. Depending on the person specification, paucal is either expressed the same way as a proclitic, on par with the SG/DL/PL forms, or is jointly realized by a special paucal enclitic and a plural proclitic. I will mostly set aside the paucal number system in this paper. See Foley (1991, pp.216-225) for details and Phillips (1993) for a brief analysis.

⁶Throughout this paper, the noun classes are glossed with roman numerals. However, these noun class distinctions are visible only in the set A paradigm. When a non-human nominal is expressed with set B or set C (e.g. if it is a transitive subject or an indirect object), its class is neutralized and it is encoded the same way as 3rd person human nominals. An example of this is given in (i), in which we see that class VIII *kacmpt* ‘canoes’ can be expressed with the set A form *ya-* or the 3rd person plural set C form *-mpun*.

(i) *No class distinctions in set C*

- a. **kacmpt** payum **ya-mpu-yamal-wat**
canoe.VIII.PL man.PL VIII.PL.A-3PL.B-carve-HAB
 ‘The men usually carve the canoes.’ (F228)

- b. **kacmpt** anti i-kay-pul-c-**mpun**
canoe.VIII.PL ground.VIII.SG VIII.SG.A-1PL.B-rub-PERF-3PL.C
 ‘We rubbed ground on the canoes.’ (F212)

- b. **pu-n-tay**
3PL.A-3SG.B-see
 ‘He saw them.’ (F195)
- c. **k-mpu-ŋa-tkam-t**
VI.SG.A-3PL.B-1SG.C-show-PERF
 ‘They showed me it (the coconut).’ (F208)
- d. **k-ka-tkam-r-akn**
VI.SG.A-1SG.B-show-PERF-3SG.C
 ‘I showed him it (the coconut).’ (F211)

The examples in (5) also illustrate that, as mentioned earlier, the nominals cross-referenced by the clitics need not be overtly expressed; Yimas is ubiquitously *pro* drop. As will be discussed below, when the clitics co-occur with their associated nominals, there is often a sense of topicalization or emphasis.

The examples presented in this section are ones in which the use of a clitic paradigm maps to a particular grammatical function and thematic role. However, as I will show in §3 and beyond, sometimes these mappings break down. The central focus of this paper is why this happens and how it ultimately informs our understanding of dependent case.

2.2 Clitic doubling and clitic movement

As mentioned earlier, the nominals that are cross-referenced by the clitics do not need to be overtly expressed. However, as (6) shows, only a morphologically unmarked nominal may be clitic doubled; while oblique arguments also exist, they cannot be clitic doubled.⁷

(6) *Unmarked nominals may be clitic doubled but obliques may not*

- a. narmaŋ namat **pu-n-tu-t**
 woman men **3PL.A-3SG.B-kill-PERF**
 ‘The woman killed the men.’ (F90)
- b. panmal ŋaykum kantk **na-na-wa-n**
 man women with **3SG.A-DEF-go-PRES**
 ‘The man is going with the women.’ (F108)

Previous generative analyses of Yimas assume that the cross-referencing morphology that I have been calling clitics are agreement morphemes, i.e. the exponents of ϕ -feature valuation via Agree (Phillips, 1993, 1995; Gluckman, 2014). Foley (1991), however, describes them as *pronominal affixes*, since their presence seems to correlate with discourse effects pertaining to givenness or referentiality. For Foley, the pronominal affixes occupy syntactic argument positions, while the nominals they cross-reference are dislocated or appositional and thus only indirectly linked to the pronominal affixes. While I also take these morphemes to be pronominal, I diverge from Foley’s position in one major respect. I argue that the morphemes are specifically *doubled clitics* that are base-generated with their associates and arrive at their surface position by *movement*—the clitics and their associates are, therefore directly linked.

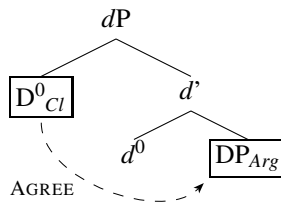
Concretely, I assume the Big DP analysis of clitic doubling (Torrego, 1988; Uriagereka, 1995; Cecchetto, 2000, a.o.), in particular the implementation by Nevins (2011) and Arregi and Nevins (2012).⁸ Under this view, a clitic is a D^0 element adjoined to its associate, a complex DP; the clitic receives the ϕ -features of its associate via Agree, prior to movement. This is schematized in (7) (the complex DP is

⁷The distinction between unmarked vs. oblique corresponds roughly an argument’s grammatical function. However, how a nominal comes to be morphologically marked as oblique falls outside of the scope of this paper.

⁸An alternative is the A-movement analysis of clitic doubling (Anagnostopoulou, 2003; Harizanov, 2014; Kramer, 2014, a.o.), which takes the doubled clitic to be the head of an A-chain. However, it is not obvious that doubled clitics in Yimas exhibit properties of A-movement. For instance, the doubled clitics do not seem to create new antecedents for binding (cf. Foley, 1991, pp. 383-384), which would be expected under the A-movement analysis.

represented as *dP* for clarity.⁹

(7) *Big DP:*



Assuming, following Postal (1966) and Abney (1987) that pronouns are also D^0 s, this captures why the clitics are identical to the independent pronouns of the language, as shown throughout (8):

(8) *Identity between set A and pronouns*

	1sg	1dl	1pl	2sg	2dl	2pl	3sg	3dl	3pl
Set A	ama-	kapa-	ipa-	ma-	kapwa-	ipwa-	na-	impa-	pu-
Pronoun	ama	kapa	ipa	mi	kapwa	ipwa	na ¹⁰	impa	pu

This identity holds only for the set A paradigm, however, as the pronominals are morphologically invariant and always surface as in (8). In contrast, the set B and C clitic paradigms look nothing like the pronouns—a surprising result, if these are the output of clitic doubling as well. Woolford (2003) suggests that only the set A morphemes are clitic in nature, while set B and C morphemes are actually instances of agreement. However, explaining the non-identity between the pronouns and the set B and C forms while viewing all clitics as instances of D^0 will be a central part of this paper. In §4 and beyond, I will propose that whether a clitic surfaces as A or as B or C is systematically determined by factors that only come into play *after* clitic doubling (and clitic movement) has taken place. This means that the immediate product of clitic doubling is always a copy of the ϕ -features of the clitic’s associate, regardless of its surface realization.

Another argument for a clitic doubling analysis comes from the fact that these clitics are *non-obligatory*.¹¹ As shown below, Yimas allows verbs with *no clitic doubling* (9a), *partial clitic doubling* (9b), and *full clitic doubling* (9c). Each example in (9) contains two syntactic arguments but differs in the total number of clitics present. Crucially, morphemes drawn from *any* of the three clitic paradigm may be omitted. That clitic doubling is not obligatory will be important for the overall analysis of the paper.

(9) *Clitic doubling is optional*

- a. numn-mat Kampramanan wupal-cap-mpi
villager-PL place name climb-CMPL-IRR
'The villagers all climbed Kampramanan.' (*no doubling*) (F471)
- b. m-n **impa**-tay-mpi-kwalca-k paympan
DEM-SG **3DL.A**-see-SEQ-rise-IRR eagle
'He, the eagle, saw them both and took off.' (*partial doubling*) (F453)
- c. kacmpt payum **ya-mpu**-yamal-wat
canoe.VIII.PL man.PL **VIII.PL.A-3PL.B**-carve-HAB
'The men usually carve the canoes.' (*full doubling*) (F228)

The occurrence of clitic doubling is sensitive to discourse. As described by Foley (1991, pp. 232–

⁹For clarity, I will represent Yimas as head-initial throughout this paper.

¹⁰Unlike the 1st and 2nd person pronouns, which are independent morphemes, the 3rd person pronouns are bound; they require a deictic suffix *-k* encoding proximity.

¹¹See Franks and Rudin (2005), Anagnostopoulou (2006), Kramer (2014), and others for discussion of the optionality of clitic doubling cross-linguistically, and of this optionality as a diagnostic for clitic doubling rather than agreement.

234), Yimas clitics typically cross-reference discourse-established information and are omitted with new information. Consider the minimal pair in (10):

(10) *Clitic doubling is discourse sensitive*

a. [impram pay-cu-mpwi] **pia-n-kacapal**
 [basket.VII.SG carry-NFN-COMP] **COMP.A-3SG.B-forget**
 ‘He forgot to carry the basket’ (F389)

b. [impram pay-cu-mpwi] **na-kacapal**
 [basket.VII.SG carry-NFN-COMP] **3SG.A-forget**
 ‘He forgot to carry the basket’ (F389)

In (10a), there are two clitics on the verb, cross-referencing both the 3SG external argument and the embedded clause;¹² this is the full clitic doubling pattern. In (10b), however, only the matrix subject is encoded on the verb; this is the partial clitic doubling pattern. These two constructions are used in slightly different contexts, reflecting the given vs. new distinction. According to Foley, in (10a) “the intention expressed by the complement has been [previously] stated explicitly” (p. 390), whereas this is not necessarily the case for (10b). That clitic doubling is associated with information-structural notions of topichood and givenness has been noted cross-linguistically, e.g. throughout the Balkan languages (Rudin, 1997; Kallulli, 2000, 2008; Harizanov, 2014, a.o.). The idea behind discourse-sensitive clitic doubling is that these clitics function like pronouns by referring to some element in the discourse. This appears to be the function of the Yimas clitics as well.

To account for the information structural correlates of clitic doubling, I propose that clitic movement targets the CP domain.¹³ Following recent work on head movement and clitic doubling (Matushansky, 2006; Nevins, 2011; Harizanov, 2014), the landing site of the clitic is Spec-CP, but the clitic undergoes m-merger with C⁰. In (11), both the subject and the direct object generate big DPs whose clitics move to Spec-CP. Multiple clitic doubling results in the creation of multiple specifiers, which ‘tuck in’ in the sense of Richards (2001) in an order-preserving manner (Nevins, 2011; Harizanov, 2014).

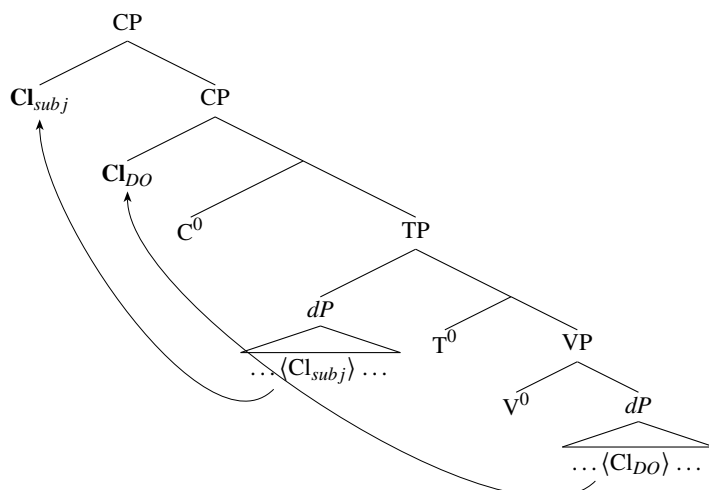
¹²Yimas possesses two additional doubled clitics that cross-reference embedded clauses: roughly, *pia-* for embedded complements encoding speech reports and *tia-* for embedded complements encoding actions.

¹³An independent piece of support for this comes from the fact that the doubled clitics interact with other CP-level morphemes expressing various forms of modality or mood, the topic of §6. For example, the presence of the morpheme *ka-*, which encodes likelihood, results in a set A clitic (ia) surfacing instead as set B (ib). As I will show throughout this paper, the form of a given clitic is locally affected by other morphemes in the CP domain and unaffected by morphemes found on other functional heads.

(i) a. **pu-tja-tay**
3PL.A-1SG.C-see
 ‘They saw me.’ (F196)

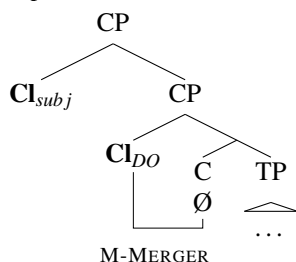
b. **ka-mpu-tja-tput-n**
LIKE-3PL.B-1SG.C-hit-PRES
 ‘They are going to hit me.’ (A → B) (F266)

(11) *Movement to Spec-CP:*

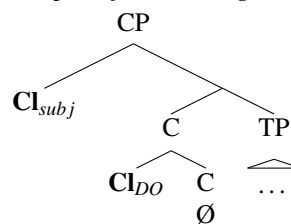


M-merger of the clitics is illustrated in (12)-(13). The input of m-merger consists of two heads in a Spec-Head configuration, as in (12a); the output is a complex C^0 with clitics attached to it (12b). Since our example has two doubled clitics, m-merger applies again to the output in (12b) (repeated as (13a)), ultimately yielding the structure in (13b).

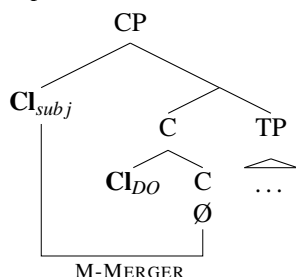
(12) a. *Input:*



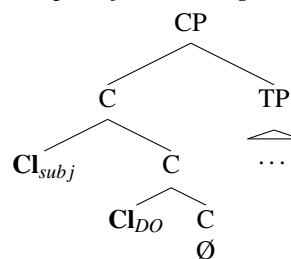
b. *Output after m-merger*



(13) a. *Input:*



b. *Output after m-merger:*



I assume that the end result of successive m-merger is order-preserving, as shown in (13b), in that the structural hierarchy of the clitics on C^0 corresponds to the structural hierarchy of the nominals being doubled. At this point, if we were to map the structural order of the clitics on C^0 to a linear string, we would expect the subject clitic to linearly precede the object clitic, yielding the sequence *B-A-verb*. However, as noted earlier, the clitics always surface as *A-B-C*, regardless of which of these clitics (as well as how many of them) are present. I assume that this linear morpheme order is enforced by a postsyntactic linearization operation that overrides the hierarchical order of clitics. This point will be revisited in §6.

To conclude, in this section I showed that Yimas encodes grammatical relations on a series of preverbal morphemes, which I analyze as doubled clitics. The morphemes may be realized as set A, B, or C, which correspond roughly to ABS, ERG, and DAT case on nominals respectively. I assume that the clitics are D^0 s generated within a Big DP structure and receive their ϕ -features via Agree; they undergo information structure-driven movement to Spec-CP and then undergo m-merger to C^0 . The clitics on

C^0 are found in the same hierarchical order as the doubled arguments at the clausal level. In the next section, I turn to the distributions of the three clitic paradigms.

3 Morphological alternations on the Yimas clitics

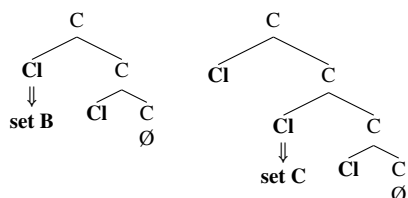
3.1 Overview

In this section, I argue that the A, B, and C clitic paradigms are best analyzed as *morphological alternations* that arise depending on the total number of (and types of) clitics present on a given verb. Though often not remarked upon in the previous literature (including Foley, 1991), these alternations are ubiquitous in Yimas, due to the general non-obligatoriness of clitic doubling and the large number of valency-changing processes available in the language. The optionality of clitic doubling is especially crucial to the argument that the morphological alternations are computed *internal* to the clitics, since the alternations surface even when the sentence-level syntax stays constant.

I will demonstrate that clitics cross-referencing intransitive and transitive subjects alike alternate between set A and set B, while indirect object¹⁴ clitics alternate between set A and set C. Moreover, direct object clitics do not alternate at all, but always surface as set A. In the following sections, I will show that these paradigmatic alternations are determined *configurationally*, based on a clitic’s relative hierarchical position on C^0 —this is the crucial connection to dependent case. Set B is found on the higher of two clitics on C^0 , while set C is found on the intermediate of three clitics on C^0 , mirroring the positions of dependent ERG and DAT case on nominals. The parallel also extends to set A and ABS case; I will propose that both are elsewhere forms. A summary of the findings is given below:

(14) *Realizational environments for clitic forms*

Clitic form	Morphosyntactic context
Set A	Elsewhere
Set B	Higher of two clitics
Set C	Intermediate of three clitics



Importantly, the behaviour of the Yimas clitics reveals a *dissociation between morphological form and thematic role*: set B and C are available whenever the prerequisite realizational environments are met internal to the clitic complex regardless of thematic role, and unavailable whenever these environments are not met.

I organize this section as follows. In §3.2, I discuss the set A~set B alternation found on clitics cross-referencing subjects, and demonstrate that set B surfaces only if the subject clitic co-occurs with another clitic; otherwise, the subject clitic is realized as set A. In §3.3, I turn to the set A~set C alternation found on clitics cross-referencing indirect objects and other ‘intermediate’ arguments of ditransitive constructions, and show that, like set B, the availability of set C is contingent on the presence of multiple clitics on the verb. Discussion of set A as well as an analysis of the context-insensitive cases of set C will be relegated to §4, which is where I present the full analysis in detail.

¹⁴I will use the term ‘indirect object’ broadly to refer to benefactives, goals, causees, applicatives, and other such arguments that sit between the subject and direct object in ditransitive constructions.

3.2 Alternations on subject clitics

As illustrated in (5a-b), repeated here as (15), subjects of transitive verbs (agents) may be cross-referenced with set B, and subjects of intransitive verbs with set A.

(15) *Subject clitics are A or B*

- a. **pu-wa-t**
3PL.A-go-PERF
 ‘They went.’ (F195)
- b. **pu-n-tay**
3PL.A-3SG.B-see
 ‘He saw them.’ (F195)

We may preliminarily observe that these examples exhibit a ERG-ABS pattern, in that the intransitive subject clitic in (15a) takes the same form as the object clitic in (15b), while the transitive subject clitic in (15b) uses a different paradigm. However, I argue that, while it is correct that the clitic patterns are reminiscent of an ERG-ABS alignment, the proper link can only be made under a *dependent* treatment of ERG case. Specifically, the subject of any given clause may be cross-referenced by either set A or set B—the choice depending on the presence or absence of a clitic cross-referencing a lower argument. This property suggests that the choice of paradigm for the subject clitic has no direct connection to factors such as transitivity or agentivity that are sometimes proposed as relevant to ERG case (e.g. Woolford, 1997, 2006; Aldridge, 2008; Legate, 2008).

I illustrate this alternation by drawing on three independent properties of Yimas morphosyntax. The first is the non-obligatoriness of clitic doubling, introduced in §2. I also show that the forms of the doubled clitics are affected by valency-changing processes such as applicativization. Finally, the realization of set B on transitive subject clitics may be blocked by the presence of certain clitics that are obligatorily realized as set C. The broader conclusion here is that the surface realization of a subject clitic is determined based on its co-occurrence with another clitic.

3.2.1 Partial doubling

The possibility of partial clitic doubling is an important diagnostic because it allows us to manipulate the number of clitics while keeping the sentence-level syntax constant. In the minimal pair in (16), repeated from §2.2, the presence vs. absence of the (set A) clitic cross-referencing the embedded complement¹⁵ determines whether the clitic cross-referencing the transitive subject is set A or set B. In (16b), the clitic cross-referencing the transitive subject takes a set B form, as expected. However, in the absence of the clitic *pia-*, the subject clitic is no longer set B—instead, it surfaces as set A. The relevant contrast is highlighted by the boxed morphemes. Thus, while subjects can be cross-referenced by both set A and set B forms, the choice of which form to use seems to depend on the presence of a second clitic.

(16) *Partial doubling reveals an alternation on subject clitics*

- a. [impram pay-cu-mpwi] **pia-n**-kacapal
 [basket.VII.SG carry-NFN-COMP] **COMP.A-3SG.B**-forget
 ‘He forgot to carry the basket.’ (F389)
- b. [impram pay-cu-mpwi] **na**-kacapal
 [basket.VII.SG carry-NFN-COMP] **3SG.A**-forget
 ‘He forgot to carry the basket.’ (F389)

Note that this data alone is compatible with an alternative hypothesis, that set B forms become unavailable as soon as another clitic is removed. However, this alternative is incorrect; in (17), for example, set

¹⁵We can infer that this clitic is set A based on its word-initial position and the fact that non-human class distinctions are only available with the set A paradigm.

B is retained on the subject clitic even though the direct object is not cross-referenced. This is because the verb still hosts a second clitic (cross-referencing the indirect object, realized here as set A).

(17) *Set B is truly dependent on the presence of a second clitic*

irwa ŋaykum **na-mpu**-tmi-ampa-t
 mat.IX.SG woman **3SG.A-3PL.B**-CAUS-weave-PERF
 ‘The women got her to weave a mat.’ (F292)

We may moreover generalize at this point that the second non-subject clitic in all cases surfaces as set A. I will revisit this point later.

3.2.2 Applicativization

Turning now to applicativization, we find further support for the idea that the set A~B alternation on subject clitics is dependent on clitic context. In such constructions, an otherwise oblique nominal is promoted to core status, and then makes it available for clitic doubling (recall that oblique nominals cannot be doubled).

Of interest to us is what happens to the subject clitic when the applicativized internal argument is also cross-referenced on the verb as a clitic. In (18), the presence of the clitic cross-referencing the indirect object argument does not affect the form of the subject clitic, which remains set B in both constructions. This is because the verb is transitive, so there are already two clitics present without applicativization.

(18) *Applicative of transitive verb; no change on subject clitic*

a. **na-ka**-wayk-t
 v.SG.A-**1SG.B**-buy-PERF
 ‘I bought it.’ (F230)

b. **ya-ka**-taŋ-wayk-r-akn
 v.PL.A-**1SG.B**-APPL-buy-PERF-**3SG.C**
 ‘I bought them (cards) for him.’ (F307)

In contrast, consider what happens to the subject clitic when the verb is intransitive, as in (19)-(20) below. In both pairs of examples, the subject clitic again alternates between set A and B. This highlights the fact that the choice to use set B has nothing to do with external argument status, since even unaccusative subjects may be encoded by a set B clitic when an applicativized argument is present. Moreover, it fits with what was observed earlier with the partial doubling constructions: the realization of a subject clitic as set B is contingent on the occurrence of a second clitic. While the partial doubling constructions showed that set B may be made unavailable by removing this second clitic, the applicativization examples demonstrate the opposite—that adding a second clitic feeds the availability of set B.

(19) *Applicative of unergative; subject clitic A→B:*

a. **na**-na-iray-n
3SG.A-DEF-cry-PRES
 ‘He is crying.’ (F426)

b. **na-n**-taŋkway-iray-ŋcut
3SG.A-3SG.B-APPL-cry-RM.PST
 ‘He cried over her (looking at her body).’ (F315)

(20) *Applicative of unaccusative; subject clitic A→B:*

a. impa-n kantk **na**-kwalca-t
 3DL-FR.DIST with **3SG.A**-rise-PERF
 ‘He got up with them both.’ (F303)

- b. **impa-n-taj-kwalca-t**
3DL.A-3SG.B-APPL-rise-PERF
 ‘He got up with them both.’ (F303)

Note now that, in all the data shown so far, the clitic whose presence triggers set B on the subject clitic is always *structurally lower*—and c-commanded by—the subject clitic. This is based on the assumption that clitic movement and m-merger preserve the hierarchical order of the arguments being doubled, as discussed in §2.2.¹⁶ As discussed above, the logic behind the clitic forms is dissociated from thematic role, as both set A and set B may appear on any subject clitic, given the right environment. I will ultimately propose that the link between set B and ERG case follows from a dependent case analysis, such that ERG case is realized on any subject that c-commands some other nominal local to it. Treating the set B paradigm in Yimas as dependent similarly explains its sensitivity to the presence of other clitics.

3.3 Alternations on clitics encoding indirect objects

Turning now to set C, I demonstrate that this clitic paradigm is also context-sensitive, surfacing in a particular clitic configuration. However, in contrast to the set B paradigm, the set C paradigm is divisible into two subclasses, as in (21), based on what the set C morphology is used to cross-reference. I will call these different usages of set C morphology ‘set C_{DEP}’ and ‘set C_{PART/POSS}’ respectively.

(21) *Subclasses of set C:*

	Type of argument doubled	Sensitive to clitic context?
Set C _{DEP}	3rd person indirect objects	Yes
Set C _{PART}	Participant internal arguments	No
Set C _{POSS}	Inalienable possessors (all persons)	No

As summarized above, one use of set C morphology is to cross-reference 3rd person indirect objects. This use of set C is sensitive to the number of clitics on C⁰, and, as a result, these clitics alternate between set C and set A. Later, I will argue that this usage of set C parallels the distribution of intermediate dependent case (Harley, 1995; Podobryaev, 2013). However, set C clitics are also used for 1st/2nd person (participant) internal arguments and inalienable possessors. As will be discussed in §3.4, such instances of set C are not sensitive to clitic context, meaning that it is invariably used to cross-reference certain types of nominals, regardless of the total number of clitics present. I will call this kind of set C morphology ‘C_{PART/POSS}.’

Set C_{DEP} morphology is used to cross-reference various kinds of indirect objects, as shown in (22):

(22) *Set C clitics cross-reference indirect objects*

- a. **k-ka-tkam-r-akn**
VI.SG.A-1SG.B-show-PERF-3SG.C
 ‘I showed him it (the coconut).’ (IO) (F211)
- b. **tpuk ka-ka-na-tmi-am-nt-akn**
sago pancake.X X.SG.A-1SG.B-DEF-CAUS-eat-PRES-3SG.C
 ‘I made him eat a sago pancake.’ (causee) (F292)
- c. **k-n-taj-pampat-ntuk-nakn**
VI.SG.A-3SG.B-APPL-cook-RM.PST-3SG.C
 ‘She cooked the heart for him.’ (appl.) (F307)

¹⁶Given that unaccusative subjects behave like transitive and unergative subjects, I will assume that unaccusative subjects are base-generated in object position but move to Spec-TP (Perlmutter, 1978; Burzio, 1986; Hale and Keyser, 1993). Thus, unaccusative subject clitics end up structurally higher than the other clitics on C⁰ after clitic movement.

However, as with set B in §3.2, the realization of set C_{DEP} morphology on a given clitic is dependent on the surrounding clitic context. Clitics cross-referencing indirect objects thus also exhibit paradigmatic alternations, as these clitics surface as set A when the appropriate clitic context fails to be met. Like in §3.2, I provide arguments for this characterization from applicativization and partial clitic doubling constructions.

Recall the clitic pattern in applicative constructions from §3.2.2: clitics cross-referencing subjects of transitive verbs may surface uniformly with set B, while those cross-referencing subjects of intransitive verbs are typically set A but surface instead as set B in applicative constructions. There is also a split between transitive and intransitive verbs with regards to the appearance of set C. In (22c) above, repeated in (23a), the verb is transitive and the applicativized argument is set C. In contrast, we see that the applicativized argument is cross-referenced by *set A* morphology in intransitive contexts (23b-c):

(23) *Form of indirect object clitics sensitive to transitivity*

- a. **k-n-taŋ-pampat-ntuk-nakn**
 VI.SG.A-3SG.B-APPL-cook-RM.PST-3SG.C
 ‘She cooked the heart for him.’ (F307)
 (*applicativization of transitive*)
- b. **na-n-taŋkway-iray-ꞑcut**
 3SG.A-3SG.B-APPL-cry-RM.PST
 ‘He cried over her (looking at her body).’ (F315)
 (*applicativization of unergative*)
- c. **impa-n-taŋ-kwalca-t**
 3DL.A-3SG.B-APPL-rise-PERF
 ‘He got up with them both.’ (F303)
 (*applicativization of unaccusative*)

This follows from the generalization that the realization of set C_{DEP} on a clitic requires that it co-occurs with two other clitics on C⁰—three in total. In (23a), this requirement is satisfied; in (23b-c), however, it is not, so the clitic cross-referencing the applicativized argument is set A.

Turning now to the non-obligatoriness of clitic doubling, we find that, like set B, set C_{DEP} is truly controlled by clitic context, rather than extraneous factors such as argument structure. As shown in (24), set C is unavailable on indirect object clitics in partial doubling constructions. In both examples, a transitive verb is causativized, so they contain the same three sentence-level arguments—subject, causee, and direct object. However, the clitic cross-referencing the causee is set C in (24a) but set A in (24b). Crucially, the only difference is in the number of clitics present; in (24b), the direct object is not clitic doubled.

(24) *Set C unavailable with partial doubling*

- a. tpuk **ka-ka-na-tmi-am-nt-akn**
 sago pancake.X X.SG.A-1SG.B-DEF-CAUS-eat-PRES-3SG.C
 ‘I made **him** eat a sago pancake.’ (F292)
- b. irwa **ꞑaykum na-mpu-tmi-ampa-t**
 mat.IX.SG woman 3SG.A-3PL.B-CAUS-weave-PERF
 ‘The women got **her** to weave a mat.’ (F292)

In summary, set C is context-sensitive, appearing on indirect object clitics when they co-occur with two other clitics. Moreover, set C surfaces in a particular syntactic configuration among the clitics on C⁰; the set C clitic is structurally *intermediate*, both c-commanding a lower clitic and c-commanded by a higher clitic.

3.4 Context invariant usages of set C

Earlier, I stated that there are two distinct subtypes of set C morphology, based on their different distributions. In addition to cross-referencing various types of indirect objects (set C_{DEP}), the same clitic paradigm is used to cross-reference participant internal arguments and inalienable possessors of all persons (set C_{PART/POSS}). Whereas set C_{DEP} may only surface when there are three clitics on C⁰, this is not the case for set C_{PART/POSS}, which is insensitive to the surrounding clitic context. In (25), for example, partial clitic doubling does not affect the surface realization of the clitic cross-referencing the participant internal argument, which remains set C; (25c) additionally demonstrates that using set A morphology instead is grammatical but causes the construction to lose its intended meaning.

(25) *Set C_{PART} is context-insensitive and obligatory*

- a. **na-kra**-tay
3SG.A-1PL.C-see
 ‘He saw us.’ (F205)
- b. Mitchell **kra**-tay
 Mitchell **1PL.C**-see
 ‘Mitchell saw **us**.’ (F,p.c.)
- c. #Mitchell **ipa**-tay
 Mitchell **1PL.A**-see
Intended: ‘Mitchell saw us.’ (F,p.c.)
(grammatical as ‘We saw Mitchell.’)

Similarly, inalienable possessors are also obligatorily cross-referenced with set C, regardless of the surrounding clitic context (26).

(26) *Set C_{POSS} is also context-insensitive and obligatory*

- a. narm **p-mpu-tpul-kamprak-r-akn**
 skin.VII.SG **VII.SG.A-3PL.B-hit-break-PERF-3SG.C**
 ‘They hit and broke **his** skin.’ (F283)
- b. narm **pu-tpul-kamprak-r-akn**
 skin.VII.SG **3PL.A-hit-break-PERF-3SG.C**
 ‘They hit and broke **his** skin.’ (F324)
- c. narm tpul-kamprak-r-**akn**
 skin.VII.SG hit-break-PERF-**3SG.C**
 ‘They hit and broke **his** skin.’ (F,p.c.)

Of interest to us is how these set C clitics interact with other clitics in the verb complex. In §3.2, we saw that a subject clitic is realized as set B in the presence of a lower clitic. However, the examples below demonstrate that set B morphology cannot be triggered by a set C_{PART/POSS} clitic; in both (27) and (28) the transitive subject clitic remains set A. We may thus generalize that the clitic triggering set B on a subject clitic must be *set A*.

(27) *Set C_{PART} blocks set B on subject clitics*

- a. **na-mpu**-tay
3SG.A-3PL.B-see
 ‘They saw him.’ (F195)
- b. **pu-ŋa**-tay
3PL.A-1SG.C-see
 ‘They saw me.’ (F196)

(28) Set C_{POSS} blocks set B on subject clitics

a. wampuj mama-k-n **na**-ti-k-nakn
 heart.V.SG bad-IRR-V.SG **V.SG.A**-feel-IRR-3SG.C
 ‘His heart felt bad.’ (i.e., ‘He was angry.’) (F232)

b. narm **pu**-tpul-kamprak-r-akn
 skin.VII.SG **3PL.A**-hit-break-PERF-3SG.C
 ‘They hit and broke his skin.’ (F324)

Altogether, the observations about set $C_{\text{PART/POSS}}$ are reminiscent of similar observations about quirky or inherent (lexically-assigned) case on nominals, though I leave an analysis of these facts for §4.3. §4 is also where I present a full analysis of the other clitic patterns. The discussion in this section has yielded the following generalizations:

- (29) i. A clitic is realized as set B if it c-commands a set A clitic.
 ii. A clitic is realized as set C if it c-commands a set A clitic and is c-commanded by a set B clitic.
 iii. A clitic cross-referencing either a participant internal argument or an inalienable possessor is invariably set C.

3.5 Summary

The Yimas clitic system exhibits context-sensitive morphological alternations in a way that is reminiscent of the distribution of dependent case on nominals at the sentence-level syntax. In Yimas, subject clitics alternate between set A and B, whereas clitics cross-referencing indirect objects alternate between set A and set C. Both types of alternations are controlled by the total number of clitics present; set B requires the presence of one other clitic, while set C requires two other clitics. I also showed that, despite its uniform morphology, the set C paradigm should actually be divided into two subtypes. Unlike the set C morphology that cross-references indirect objects, participant internal arguments and inalienable possessors are invariably set C.

In §4, I will unify all of these observations with the derivation of clitic doubling and clitic movement from §2. I will propose that the clitic alternations can be derived by morphological rules referencing the structural configuration of the clitics on C^0 , while the non-alternating instances of set $C_{\text{PART/POSS}}$ involve clitic movement to a lower head.

4 Analysis of the morphological alternations

4.1 Overview

The goal of this section is to explain the distributions of the three morphological paradigms on the clitics. In §4.2, I propose that the context-sensitive set B and C_{DEP} forms are triggered by morphological rules referencing the structure of the clitic complex on C^0 ; specifically, the rules are based on the c-command relationships among the clitics on C^0 . As I will discuss, the rules are crucially calculated internal to the clitic complex rather than over the nominal arguments at the sentence-level, in light of the phenomenon of partial doubling, which shows that the nominal arguments themselves do not affect the realization of the doubled clitics. The proposal will also account for some additional generalizations about the distribution of the set A paradigm.

Section 4.3 then discusses the context-invariant usage of set $C_{\text{PART/POSS}}$, which I showed above to surface on clitics cross-referencing inalienable possessors and participant internal arguments. I point out of a number of additional differences between these clitics and the context-sensitive ones, and propose that the root of these differences comes from the fact that these clitics are found in a different head, which I call F^0 . Unlike the context-sensitive clitics, which are doubled for information structural reasons and

move to CP, the clitics that target the FP domain do so obligatorily. The set C morphology on these clitics reflects their special status.

4.2 Morphological rules for set B and C

In §3, I demonstrated that the set B and C_{DEP} paradigms alternate with the set A paradigm. Because sets B and C_{DEP} are context-dependent, neither may surface if the appropriate morphosyntactic environment fails to obtain; in such cases, the clitics are realized instead as set A. Therefore, set A has an *elsewhere distribution*, as it surfaces precisely where sets B and C cannot. A few illustrative examples are given in (30). In (30a-b), there is only one clitic on C⁰, so it is realized as set A, while in (30c-d), we see set A co-occurring with sets B and C.

(30) *Set A has an elsewhere distribution*

a. **ama-wa-t**
1SG.A-go-PERF
 ‘I went.’ (F196)

b. nawn **ma-tpul?**
 who **2SG.A-hit**
 ‘Who did you hit?’ (F235)

c. **pu-n-tay**
3PL.A-3SG.B-see
 ‘He saw them.’ (F195)

d. **k-ka-tkam-r-akn**
VL.SG.A-1SG.B-show-PERF-3SG.C
 ‘I showed him it (the coconut).’ (F211)

Notice that the set A clitic cross-references the direct object in both (30c-d). In general, whereas subject clitics and indirect object clitics alternate in morphological form, clitics cross-referencing direct objects do not. Put differently, whereas direct objects are always set A, non-direct object clitics *alternate* between set A and some other paradigm.

There are specific conditions that determine when the alternating clitics are realized as set A and when they are not. Consider the contrast in (31). Both examples are applicative constructions. In (31a) the direct object clitic is set A while the applied argument clitic is set C; in (31b), however, there is no direct object clitic, so the applied argument clitic surfaces as set A. We see a similar effect in the ditransitive pair in (32); there is no direct object clitic in the partial doubling construction in (32b), so the causee clitic is realized as set A.

(31) *Set A on DO vs. causee*

a. kat **ya-ka-taŋ-wayk-r-akn**
 card.V.PL **V.PL.A-1SG.B-APPL-buy-PERF-3SG.C**
 ‘I bought (a pack of) cards for him.’ (F307)

b. **na-n-taŋkway-iray-ŋcut**
3SG.A-3SG.B-APPL-cry-RM.PST
 ‘He cried over her (looking at her body).’ (F315)

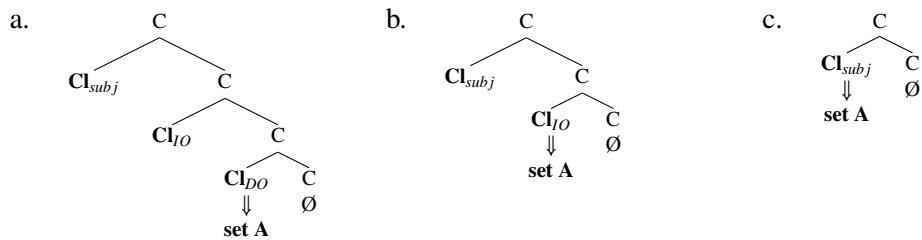
(32) *Set A in full vs. partial doubling*

a. tpuk **ka-ka-na-tmi-am-nt-akn**
 sago pancake.X **X.SG.A-1SG.B-DEF-CAUS-eat-PRES-3SG.C**
 ‘I made him eat a sago pancake.’ (F292)

- b. irwa n̄aykum **na**-mpu-tmi-ampa-t
 mat.IX.SG woman **3SG.A**-**3PL.B**-CAUS-weave-PERF
 ‘The women got her to weave a mat.’ (F292)

We may therefore generalize that the *structurally lowest clitic on C⁰* (i.e. a clitic that does not c-command anything else) is realized as set A in all cases. As a result, the direct object clitic tends to not alternate, since it is generally lowest. On the other hand, subject clitics may only surface as set A when other nominals fail to be doubled, since they are only ever vacuously structurally lowest when they are the sole clitic present. This is schematized below.

(33) *Set A is structurally lowest*



Though set A has an apparently wider morphological distribution than sets B and C, this is due to variability in the kinds of arguments that get clitic doubled. While set A surfaces on any given clitic that is structurally lowest within the clitic complex on C⁰, sets B and C are, correspondingly, realized on clitics that are *not* lowest. Moreover, the realization of a clitic as set B or C depends on specific syntactic configurations. I suggest that we may capture these patterns by positing context-sensitive morphological rules only for B and C; conversely, clitics outside of the appropriate context (to which the rules do not apply) surface as set A, the elsewhere paradigm. As formulated in (34) and illustrated in (35), these rules are upwards-oriented, in that they apply only to clitics that c-command some other clitic in the clitic domain.

(34) *Morphological rules on Yimas clitics*

- A clitic α is realized with a **set B** form if it c-commands a clitic β within a clitic domain.
- A clitic α is realized with a **set C** form if it c-commands a clitic β and is c-commanded by a clitic γ .
- If both rules can apply to a clitic structure, apply rule b. before rule a.
- Clitics already marked as set B and C are rendered invisible for further applications of a. and b.

(35) *Schematization of (34); c-command relations represented by dashes*



Because (34b) applies before (34a), set B is only realized on the highest clitic on C⁰, while set C may be realized on a structurally intermediate clitic. Again, there is no rule specifying the distribution of set A, since clitics that fail to have the rules in (34) apply to them will automatically be realized as set A.

Finally, note that these rules are isomorphic with the rules for dependent case assignment on nominals, as introduced in §1. The extent of the parallel between the Yimas clitic system and the dependent case system will be the topic of §5. Before moving on to §5, however, I revisit the set C_{PART/POSS} clitic forms and discuss how they fit with the overall analysis proposed here.

4.3 An analysis of set C_{PART/POSS}

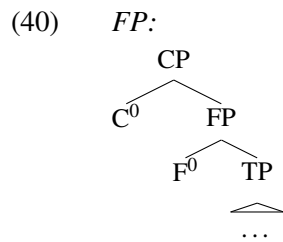
Earlier, I showed that set C_{PART/POSS}, in contrast to set C_{DEP}, is always used to cross-reference 1st/2nd (participant) internal arguments and inalienable possessors, regardless of the clitic context. I also showed that these clitics are unable to trigger set B on (transitive) subject clitics. The relevant examples are repeated below:

- (36) *Set C_{PART} is context-invariant and blocks set B on subject clitics*
- a. Mitchell **kra-tay**
 Mitchell **1PL.C-see**
 'Mitchell saw us.' (F,p.c.)
- b. **na-kra-tay**
3SG.A-1PL.C-see
 'He saw us.' (F205)
- (37) *Set C_{POSS} is also context-invariant and blocks set B on subject clitics*
- a. narm tpul-kamprak-r-**akn**
 skin.VII.SG hit-break-PERF-**3SG.C**
 'They hit and broke his skin.' (F,p.c.)
- b. narm **pu-tpul-kamprak-r-akn**
 skin.VII.SG **3PL.A-hit-break-PERF-3SG.C**
 'They hit and broke his skin.' (F324)

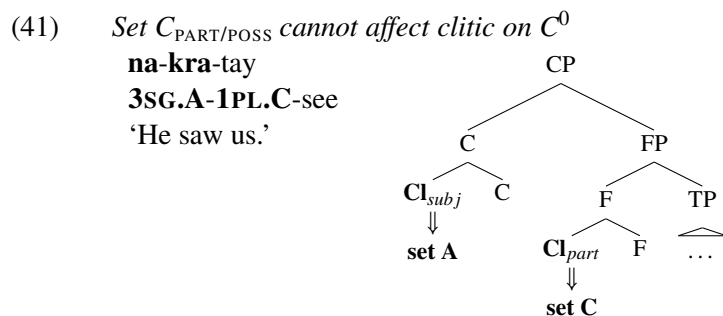
I now introduce important property of these set C forms, which will inform our analysis of these clitics. Recall that the Yimas clitics are usually optionally doubled, with doubled clitics conveying discourse-old information. As shown in (38)-(39), however, the invariant set C forms are an exception to this generalization, as these clitics are *obligatory*. This is a fact not mentioned in Foley's (1991) grammar, but Foley (p.c.) informs me that the (b) examples below are indeed ungrammatical:

- (38) *Set C_{PART} is obligatory*
- a. **na-kra-tay**
3SG.A-1PL.C-see
 'He saw us.' (F205)
- b. ***ipa na-tay**
 1PL 3SG.A-see
Intended: 'He saw us.' (F,p.c.)
- (39) *Set C_{POSS} is obligatory*
- a. yampaŋ **k-mpu-ŋa-kra-t**
 head.VI.SG VI.SG.A-3PL.B-1SG.C-cut-PERF
 'They cut my hair.' (F301)
- b. *yampaŋ **ama k-mpu-kra-t**
 head.VI.SG 1SG VI.SG.A-3PL.B-cut-PERF
Intended: 'They cut my hair.' (F,p.c.)

This reveals a new two-way generalization. Clitics that are optionally doubled may surface with any of set A, B, or C forms, modulo the morphological rules proposed earlier. In contrast, clitics that cross-reference certain kinds of arguments are both obligatorily set C *and* obligatorily doubled. I suggest that we can account for this contrast by introducing a second landing site for clitic movement, which I will call FP. This yields the following left-peripheral structure of Yimas:



Thus, while optionally doubled clitics surface on C^0 (the locus of information structural doubling), clitics that inherently bear certain features are instead targeted by F^0 . The use of the set C paradigm on these clitics is, I assume, a morphological signal that these clitics are distinct from those on C^0 —both in structural position and in reason for doubling.¹⁷ That these clitics end up attached to F^0 provides an explanation for why they do not participate in the morphological alternations affecting the clitics on C^0 —the rules governing these alternations are localized to the *clitics on C^0* . A concrete illustration of this idea is provided in (41). As the tree shows, the set $C_{\text{PART/POSS}}$ clitic cannot trigger set B on the subject clitic because it is not in the relevant clitic domain; the subject clitic is the *only clitic* on C^0 .



Situating set $C_{\text{PART/POSS}}$ clitics in a separate head also accounts for why these clitics are unaffected by other processes that take place on the complementizer. As will be discussed in greater detail in §6, various morphological effects are triggered on the C^0 -level clitics in the presence of an overt complementizer. For example, when the complementizer position is occupied by an imperative mood morpheme *naŋ-...-n*, the lowest clitic on C^0 is deleted.¹⁸ As shown in (42), however, only *third person* internal-argument clitics undergo this change; participant internal argument clitics are unaffected (and continue to surface with set C_{PART}). Again, this is because the complementizer-triggered effects are limited to the clitic domain on C^0 ; clitics situated elsewhere are outside of the scope of these effects.

- (42) *Imperative complementizer cannot delete participant object*
- a. paŋkt naŋ-~~∅~~-tput-mpa-na-ŋkan-um
 2PC IMP-~~3PL~~-hit-IMM-IMP-PC-3PL
 ‘(You few,) Hit them now!’ (F272)
- b. mi na-ŋkra-tput-mpa-n
 2SG IMP-1PL.C-hit-IMM-IMP
 ‘(You,) Hit us few now!’ (F270)

Crucially, this effect is specific to set C participant *objects*, rather than all participants; as shown below, participant subject clitics (which are context-sensitive) behave like 3rd person clitics in that they also undergo deletion in the presence of an overt complementizer (this time, negation *ta-*).

¹⁷An alternative approach would be to take these instances of set C to be analogous to oblique case on nominals, which, under the dependent case theory, do not participate in the case competition. However, as shown in §2.1, true oblique nominals are case-marked and cannot be clitic doubled. Conversely, the arguments that are cross-referenced with set $C_{\text{PART/POSS}}$ have ‘core’ grammatical functions and are obligatorily clitic doubled, and thus seem to be distinct from true obliques.

¹⁸However, the deleted clitic’s ϕ -features are encoded as a number suffix at the end of the word.

(43) *Negative complementizer can delete participant subject*

ta- \emptyset -**ገ**kra-tpul
 NEG-**2SG**-**1DL.C**-hit
 ‘You didn’t hit us two.’

(F258)

While it is not entirely clear why exactly participant internal arguments and inalienable possessors behave differently from the rest, a hint comes from the fairly robust observation that these kinds of arguments are cross-linguistically considered to be ‘special’ in some way. For example, participant internal arguments are sensitive to Person-Case Constraint effects (Anagnostopoulou, 2003, 2005; Béjar and Rezac, 2003; Nevins, 2007; Preminger, 2014, a.o.); in contrast, participant subjects never participate in PCC phenomena. Regarding possession, it is also well-known that languages make distinctions between *external and internal possession* and between *inalienable and alienable possession* (Guéron, 1985; Landau, 1999; Lee-Schoenfeld, 2006; Ritter and Rosen, 2011; Gebregziabher, 2013). The Amharic facts below are particularly relevant,¹⁹ while clitic doubling in Amharic is generally optional, it becomes obligatory when cross-referencing an alienable possessor (Kramer, 2014).

(44) *Amharic: inalienable possessors are obligatorily clitic doubled*

a. Almaz tāmari-w-i-n ayy-ät[tf]-(**iw**)
 Almaz.F student-DEF.M-ACC see-3FS.S-(**3MS.O**)
 ‘Almaz saw the male student.’

b. bärr-u t’at-e-n k’ärät’t’äf-ä-*(**ññ**)
 door-DEF.M finger-my-ACC pinch-3MS.S-*(**1S.O**)
 ‘The door pinched my finger.’

(Kramer, 2014)

The division that we see among the doubled clitics in Yimas is thus mirrored across languages, suggesting that this pattern is part of a more general phenomenon, the exact motivations of which I leave for future research. The takeaways of this section are twofold: (i) there are two distinct landing sites for clitic movement in Yimas, and (ii) the landing sites count as different clitic domains, so that a clitic m-merged to one head is invisible to a clitic m-merged to the other.

4.4 Summary

I have demonstrated that the Yimas clitic system exhibits context-sensitive morphological alternations in a way that is reminiscent of the distribution of dependent case on nominals across languages. To summarize briefly, subject clitics alternate between sets A and B, while clitics cross-referencing indirect objects (and causees, etc.) alternate between sets A and C. That these clitics alternate in form was demonstrated by comparing full vs. partial clitic doubling constructions, as well as by applying various valency-changing processes resulting in the introduction of new nominals (which could then be clitic doubled). The emergent generalization was that the morphological alternations are sensitive to the total number of clitics present. I argued that the computation of the morphological form of a clitic is based on its structural position relative to other clitics present on C⁰. The set B and C paradigms were argued to surface as a result of morphological rules; conversely, set A was taken to be an elsewhere form, surfacing only if these morphological rules cannot apply. Finally, I proposed that obligatorily doubled clitics move to F⁰ rather than C⁰. As a result, these kinds of clitics do participate in the context-dependent morphological rules yielding sets B and C.

¹⁹See also (Jaeggli, 1982, 33ff.) for similar facts in Rioplatense Spanish.

5 Parallels with dependent case

5.1 Section overview

This section demonstrates that the behaviour of the Yimas set B and C clitics mirrors the distributions of dependent ergative and dative case. Just as Yimas exhibits paradigmatic alternations on its clitics, dependent case may be characterized as context-sensitive morphological alternations on *nominals*. That the same general effect is found across both systems suggests that the phenomenon that we know as ‘dependent case’ is much broader than previously thought. The exact nature of this phenomenon will be explored in §6; this section focuses on understanding the extent of these parallels.

In §5.2, I start by providing a brief overview of dependent case theory. In §5.3, I discuss the distribution of ERG case and show that ERG case is assigned to the higher of two case-receiving nominals within some domain, regardless of the transitivity of the verb. In §5.4, I demonstrate that DAT case—though not as often discussed within dependent case theory—also sometimes bears hallmarks of dependent case. Thus, the behaviour of ERG and DAT case across languages is highly reminiscent of how I characterized the set B and C paradigms in Yimas. In §5.5, I turn to lexical usages of DAT case. Just like how Yimas has two subtypes of set C, diagnosable by their differing properties, similar kinds of splits exist in languages that make use of DAT case. Finally, the parallel between set A and ABS case will be briefly touched upon throughout this section, but will be properly discussed in §6.

5.2 Background

The theory of case realization originally developed by Yip et al. (1987), Marantz (1991), and Bittner and Hale (1996), now often called the *dependent* theory of case assignment, proposes that how morphological case comes to be realized on nouns is determined configurationally and on the basis of competition. For Marantz, the distributions of case are determined in the postsyntactic component, but, as mentioned earlier, recent reformulations of this system assert that case is assigned in the syntax proper. The assignment of case follows the case realization hierarchy given in (45) (from Marantz, 1991):

- (45) *The case realization disjunctive hierarchy:*
- a. lexically governed case (quirky/lexical case)
 - b. dependent case (ergative, accusative case)
 - c. unmarked/default case (realized on any NP otherwise unassigned case)

In the version of this system developed in Marantz (1991), nominals are in competition to be spelled out with one of the cases above, in the order given above. Once a nominal receives a particular case, it leaves the competition and is thus excluded from the rest of the competition.

The realization of lexical case is, I assume, assigned under sisterhood (First Merge) by a lexical head P^0 (McFadden, 2004; Preminger, 2011, 2014). Nominals that receive lexical case are unable to participate in the rest of the case calculation. As noted in §1, the notion of case competition is especially relevant for dependent case, which is reliant on the presence of multiple case-receiving nominals in a given domain of case assignment. Dependent case, as will be discussed in greater detail shortly, is assigned to a nominal based on its structural (c-command) relationship with another nominal. The realization of dependent case on a given nominal thus requires a case competitor in the form of another nominal (also caseless at that point of the calculation). Finally, in the absence of such a competitor, dependent case assignment is blocked, and nominals receive *unmarked case* (nominative/absolutive) instead.

I will demonstrate that the distributions of dependent case mirror the distributions of the Yimas clitic paradigms—thus, these two systems should be given a unified account. Given the strength of this parallel, I propose that dependent case can be understood as context-sensitive morphological alternations on *nominals*, since dependent case assignment is controlled by the presence or absence of other nominals in some structural domain (e.g., a syntactic phase).

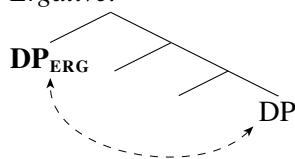
5.3 Ergative case

Dependent case is assigned to a nominal based on its structural (c-command) relationship with another nominal. Languages exhibit a nominative-accusative (NOM-ACC) or ergative-absolutive (ERG-ABS) case alignment, modulo the directionality of case assignment. The dependent case rules for ERG and ACC case that I assume in this paper are stated and schematized in (46)-(47):

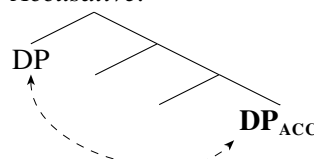
(46) **Dependent case assignment:** Given multiple case-requiring nominals within a domain of case assignment,

- a. *Ergative* case is assigned to the higher of two case-receiving nominals (the c-commander)
- b. *Accusative* case is assigned to the lower of the case-receiving nominals (the c-commandee)

(47) a. *Ergative:*



b. *Accusative:*



The dependent case system is often empirically indistinguishable from other systems of case assignment that make use of functional heads. Take, for example, the Shipibo (Panoan) data in (48). The transitive subject in (48a) is marked with the morpheme *-nin*, while the object in (48a) and the intransitive subject in (48b) are both morphologically unmarked.

(48) *Shipibo displays an ERG-ABS pattern*

- a. Maria-nin-ra ochiti noko-ke
 Maria-ERG-PRT dog.ABS find-PRF
 ‘Maria found the dog.’
- b. Maria-ra ka-ke
 Maria-PRT go-PRF
 ‘Maria went.’

(Baker, 2014)

These data alone are in principle compatible with numerous analyses of ergativity. For example, it is often argued that ERG case is inherent, assigned by transitive v^0 to the external argument, which sits in Spec- vP (Woolford, 1997, 2006; Legate, 2002; Anand and Nevins, 2006; Aldridge, 2004, 2008, a.o.). Another view takes ERG case to be abstract Case, assigned by a higher head such as T^0 or C^0 (Laka, 2000; Bobaljik and Branigan, 2006; Rezac et al., 2014; Erlewine, to appear).

However, Baker (2014) provides additional data from applicativization that resist analysis under functional-head theories of ERG case, showing that *all* Shipibo subjects are able to take ERG or ABS case when syntactic conditions warrant. This follows straightforwardly from a dependent approach to ERG case assignment—and also sounds remarkably similar to the behaviour of subject clitics in Yimas. The Shipibo data show that all subjects may bear ERG case morphology when the verb is applicativized, regardless of the transitivity of the verb.

(49) *Shipibo: Applicativization feeds ERG case*

- a. Jose-**kan**-ra Rosa atapa rete-xon-ke
 Jose-ERG-PRT Rosa hen kill-APPL-PRF
 ‘Jose killed a hen for Rosa.’ (*applicative of transitive*)
- b. Papashoko-**n**-ra Rosa bewa-xon-ai
 grandfather-ERG-PRT Rosa sing-APPL-IMPF
 ‘The grandfather is singing for Rosa.’ (*applicative of unergative*)

- c. *bimi-n-ra* Rosa joshin-xon-ke
 fruit-ERG-PRT Rosa ripen-APPL-PRF
 ‘The fruit ripened for Rosa.’ (*applicative of unaccusative*) (Baker, 2014)

Importantly, (49c) shows that even unaccusative subjects in Shipibo may surface as ERG in certain environments. This, according to Baker, demonstrates that ERG case in Shipibo is dependent on the presence of some lower argument, rather than assigned based on transitivity or agentivity. ERG case, though typically assumed to mark only transitive subjects, is in actuality able to mark all subjects in two-argument constructions regardless of the argument structural properties of the verb or the thematic role of the subject.

Recall that we saw the same behaviour of set B clitic morphology in Yimas. The similarity between ERG case and set B clitic morphology is that both apply to *subjects*, though the core difference is the *domain* in which these alternations hold. Thus, context-sensitive morphological alternations are found across languages, though these alternations may apply to different kinds of elements (e.g., nominals vs. clitics) as well as in different structural domains (along the clausal spine vs. along a single head). Just as the Yimas clitics exhibit morphological alternations, we can characterize nominals that may receive dependent case as exhibiting *case alternations*.

A similar pattern emerges in NOM-ACC systems. Some Turkic languages such as Sakha allow embedded subjects to undergo A-movement into the matrix clause (Baker and Vinokurova, 2010; Levin and Preminger, 2015), as shown in (50). Crucially, such processes feed the possibility of ACC case on the embedded subject even when the matrix predicate is *intransitive*; this strongly suggests that the source of ACC case cannot be v^0 .

(50) *Sakha: Raising feeds ACC case regardless of matrix predicate transitivity*

- a. *Keskil Aisen-y* [kel-bet dien] xomoj-do
 Keskil Aisen-ACC [come-NEG.AOR.3SG that become.sad-PST.3SG
 ‘Keskil became sad that Aisen is not coming.’
- b. *Masha Misha-ny* [yaldj-ya dien] tönün-ne
 Masha Misha-ACC fall.sick-FUT.3SG that return-PST.3SG
 ‘Masha returned (for fear) that Misha would fall sick.’ (Baker and Vinokurova, 2010)

Under dependent case theory, however, the embedded subject receives ACC case because it has raised into a position that is sufficiently local to the matrix subject. Thus, Sakha shows that the assignment of ACC case is independent of case-assigning abilities of functional heads in the structure, but rather due to the an argument’s proximity to another argument.

Similar data is provided by Podobryaev (2013) on Mishar Tatar (Turkic), which also exhibits raising out of an embedded clause and subsequent ACC case assignment. Facts parallel to Sakha are given in (51a), in which we see that ACC case on the raised argument is available in spite of the intransitive argument structure of the matrix predicate. The example in (51b) additionally demonstrates the need for a viable case competitor, as ACC case on the raised argument is blocked if the matrix subject is DAT.

(51) *Mishar Tatar: ACC on raised subject blocked by DAT matrix subject*

- a. *Alsu Marat(-ny)* [ej teze-de dip] šatlan-a
 Alsu Marat(-ACC) house build-PST.3S that be.happy-ST.IPFV.3S
 ‘Alsu is happy that Marat built a house.’
- b. *Alsu-ga Marat(*-ny)* [ej teze-de dip] tɣjɣl-a
 Alsu-DAT Marat(*-ACC) house build-PST.3S that seem-ST.IPFV.3S
 ‘It seems to Alsu that Marat built a house.’ (Podobryaev, 2013)

In sum, context-sensitive morphological alternations are attested across languages and in different structural domains. The morphological case of a nominal is affected by the presence of some other nominal in a domain of case computation (e.g., a syntactic phase), just as the paradigmatic realization of a Yimas

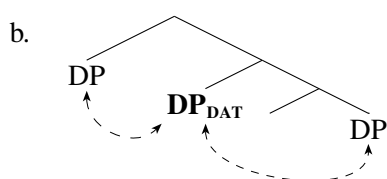
clitic is determined on the basis of its co-occurrence with other clitics on the C⁰-domain. Below, I extend this idea to DAT case.

5.4 (Dependent) Dative case

Although it is often assumed that DAT is inherent, lexical, or structural (Marantz, 1984; Woolford, 1997, 2006), I suggest that least some instances of DAT are assigned as a kind of dependent case, building on Harley (1995) and Podobryaev (2013). The working definition of dependent DAT case I am adopting is in (52).²⁰

(52) *Dependent DAT case assignment*

- a. Given multiple case-requiring nominals within a domain of case assignment, DAT case is assigned to a nominal that both c-commands a caseless nominal and is c-commanded by a caseless nominal within the relevant minimal domain (Podobryaev, 2013).



Note that this definition, which takes DAT to be *intermediate* dependent case, departs from the formulation of dependent case from Baker and Vinokurova (2010) and Levin and Preminger (2015), who suggest that dependent DAT case is assigned to the higher of two nominals within a VP. I adopt the intermediate dependent case view in this paper in order to extend the parallel with Yimas set C indirect object clitics. As discussed earlier, set C is computed internal to the domain of clitics relative to *all* of the clitics present; there is no reference to whether a clitic originates VP-internally or VP-externally.

Treating DAT case as dependent accounts for case alternations in ditransitive (tri-argumental) constructions of various types. I will mainly discuss causative constructions here. I will moreover point out some expected (and borne out) differences between NOM-ACC and ERG-ABS languages in how exactly these DAT alternations surface.

To start, recall Podobryaev’s (2013) discussion of Alutor causative constructions, repeated below. As (53) demonstrates, DAT case that is found on an indirect object may in certain circumstances disappear:

(53) *Alutor: DAT on causee unavailable when DO is incorporated*

- a. gəm-nan akka-ŋ tə-nə-svitku-və-tk-ən utte-ʔut
 1SG-ERG son-DAT 1SG.A-CAUS-cut-SUFF-PRES-3SG.P wood-ABS
 ‘I am making the son cut wood.’

- b. gəm-nan akək tə-n-u-svitku-və-tk-ən
 1SG-ERG son.ABS 1SG.A-CAUS-wood-cut-SUFF-PRES-3SG.P
 ‘I am making the son cut wood.’ (Podobryaev, 2013)

In (53), DAT case that surfaces on the causee in (53a) is unavailable when the direct object undergoes noun incorporation into the verb (53b). This is surprising under functional-head and lexical/inherent analyses of DAT case assignment, assuming that the functional head responsible for assigning a causee θ -role or DAT case to the argument in question should be available regardless of whether or not the direct object, a separate (independent) argument, is incorporated into the verb. It follows straightforwardly, however, from a view in which DAT case may be dependent, assuming that incorporated nominals cannot participate in the case computation (presumably either because they are structurally smaller than case-receiving DPs/KPs or because incorporation prevents them from needing to be licensed in the syntax).

²⁰A similar definition for intermediate DAT case is found in Harley (1995), who proposes what she calls the *Mechanical Case Parameter*, which is similar in spirit to Marantz’s (1991) dependent case rules.

As mentioned above, the Alutor paradigm in (53) instantiates a common pattern for the morphological marking of causees in causative constructions. Cross-linguistically, causees often exhibit case alternations between DAT and some other morphological case, depending on whether the causativized verb is transitive or intransitive. In other words, while Alutor triggers such a case alternation via valency-decreasing processes such as noun incorporation, we see the same effect simply by comparing intransitive and transitive verbs. A well-known example of this comes from French, as discussed in Kayne (1975), Guasti (1993), Bobaljik and Branigan (2006), and others:

- (54) *French: case on causee sensitive to transitivity of lower verb*
- a. Luc a fait acheter un livre **aux étudiants**
 Luc has made buy.INF a book(ACC) **to.the students(DAT)**
 ‘Luke made the students buy a book.’
- b. Luc a fait travailler **les étudiants**
 Luc has made work.INF **the students(ACC)**
 ‘Luc made the students work.’ (Bobaljik and Branigan, 2006)

In (54), the causee takes the dative *à* when the verb is transitive, but is accusative when the verb is intransitive.²¹ The same facts are also found in Japanese (Kuroda, 1965; Terada, 1990; Harley, 1995, a.o.), illustrated below:

- (55) *Japanese: case on causee alternates between DAT~ACC*
- a. Calvin-ga Hobbes-**ni** piza-o tabe-sase-ta
 Calvin-NOM Hobbes-DAT pizza-ACC eat-CAUS-PST
 ‘Calvin made Hobbes eat pizza.’
- b. Calvin-ga Hobbes-**o** ik-ase-ta
 Calvin-NOM Hobbes-ACC go-CAUS-PST
 ‘Calvin made Hobbes go.’ (Harley, 1995)

Though not explored explicitly by Harley (1995) and Podobryaev (2013), the existence of intermediate dependent case predicts a typological contrast between languages with a NOM-ACC case alignment and those with an ERG-ABS case alignment. Whereas French and Japanese exhibit DAT~ACC case alternations on their causees, ergative languages are instead expected to exhibit alternations between dative and *absolute* case. This is because, in dependent case theory, ERG case is assigned upward while ACC case is assigned downward. As a result, when a causativized verb is intransitive and the causee is thus the lower of two arguments, the causee receives dependent ACC case in an accusative language but surfaces as ABS in an ergative language. This, in ergative languages, the causee is expected to alternate between ABS and DAT. For instance, this seems to be borne out in Basque (56):

- (56) *Basque: case on causee alternates between DAT~ABS*
- a. Pellok **Maddiri** ogia janarazi dio
 Peter.ERG Mary.DAT bread.ABS eat.CAUS AUX.3SG.3SG.3SG
 ‘Peter made Mary eat the bread.’
- b. haurrak **katua** hilarazi du
 child.ERG cat.ABS die.CAUS AUX.3SG.3SG
 ‘The child caused the cat to die.’ (Oyharçabal, 2004)

This treatment of dependent DAT case parallels the behaviour of the Yimas set C clitics. As was shown in §3, a clitic is realized with set C morphology if it both c-commands and is c-commanded by other clitics

²¹Note that, though the dative argument follows the accusative argument in the linear string, Bobaljik and Branigan (2006), citing Rouveret and Vergnaud (1980), argue that the dative argument is actually structurally higher than the accusative argument. Evidence for this comes from intervention effects in clitic-climbing constructions.

(such that there are three clitics in total on C^0); otherwise, the clitic surfaces as set A. This, of course, is reminiscent of the alternations discussed in this section (in particular, the DAT~ABS kind displayed in ergative languages). However, Yimas crucially shows that this alternation can take place in the absence of *any* changes to the verb's argument structure or transitivity, e.g. in partial doubling constructions, repeated below in (57).

(57) *Set C~A alternation on Yimas clitics independent of argument structural properties*

a. tpuk **ka-ka-na-tmi-am-nt-akn**
 sago pancake.X **X.SG.A-1SG.B-DEF-CAUS-eat-PRES-3SG.C**
 'I made him eat a sago pancake.' (F292)

b. irwa ŋaykum **na-mpu-tmi-ampa-t**
 mat.IX.SG woman **3SG.A-3PL.B-CAUS-weave-PERF**
 'The women got her to weave a mat.' (F292)

In summary, I showed that, although DAT case is often taken to be inherent or structurally assigned, this need not be the case. In particular, the behaviour of certain kinds of ditransitive constructions lead us to a different conclusion: DAT can be dependently assigned to the middle of three arguments. This proposal correctly predicts that causees in causative constructions often display morphological alternations, depending on the transitivity of the causativized verb. Additionally, the Alutor noun incorporation data suggest that the crucial factor is really the number of arguments present in the syntax. Finally, an additional argument for a dependent treatment of DAT case comes from the fact that set C clitics in Yimas, which are clearly not controlled by argument structure, behave in a parallel fashion.

5.4.1 Non-dependent DAT case

Though I showed that DAT case may be analyzed as dependent case, this is of course not always the correct characterization; DAT case may in other circumstances be context-invariant. Similarly, the set C paradigm in Yimas was shown in §3.4 to be split into two subtypes. I follow Harley (1995), Anagnostopoulou and Sevdali (2015), and Baker (2015) in assuming that multiple types of DAT may exist in a single language, and that this may be diagnosed by its behaviour in different constructions.

Earlier, I showed that both Alutor and Japanese exhibit morphological alternations on causees, depending on the total number of arguments present. Focusing first on Alutor, the relevant finding from Podobryaev (2013) was that incorporating an object into the verb bleeds dependent DAT case on the causee. However, noun incorporation does not always yield this effect; in other kinds of ditransitive constructions in which the object has been incorporated, DAT case is retained on the indirect object. In (58), the relevant argument is not a causee, but rather a goal.

(58) *Alutor DAT not always dependent*

a. akka-ta Ø-jəl-Ø-nin əllaʔ-əŋ kənyiga
 son-ERG 3SG.A-give-AOR-3SG.P mother-DAT book.ABS
 'The son gave a/the book to his mother.'

b. akək Ø-kənyiga-jəl-at-Ø-i əllaʔ-ən
 son.ABS 3SG.S-book-give-SUFF-AOR-3SG.S mother-DAT
 'The son gave a book to his mother.' (lit. 'The son book-gave his mother.') (Koptjevskaja-Tamm and Muravyova, 1993)

The same split is found in Japanese. Recall from the previous section that a causee in Japanese may surface as DAT or ACC depending on the transitivity of the causativized verb. Interestingly, Harley (1995) shows that the causative morpheme *-sase* yields two interpretations, corresponding to two different sets of morphosyntactic properties. Under the regular causative reading ('Calvin made Hobbes go/eat pizza'), the case on the causee is dependent. However, as shown in (60), under the second hor-

tative reading ('Calvin let Hobbes go/eat pizza'), the causee is invariably DAT regardless of the choice of verb. Harley moreover provides various syntactic arguments that the DAT case found in the 'let'-causative below is prepositional in nature.

- (59) *Japanese: DAT in 'let'-causative is invariant*
- a. Calvin-ga Hobbes-**ni** ik-ase-ta
Calvin-NOM Hobbes-DAT go-CAUS-PST
'Calvin let Hobbes go.'
 - b. Calvin-ga Hobbes-**ni** piza-o tabe-sase-ta
Calvin-NOM Hobbes-DAT pizza-ACC eat-CAUS-PST
'Calvin let Hobbes eat pizza.'
- (Harley, 1995)

Finally, the same DAT split is seen in French, with an interesting consequence in tritransitive causative constructions. In (60), the indirect object *le directeur* 'the headmaster' takes the DAT form *à*; I assume that this is also prepositional or lexical in nature. The additional presence of a DAT-marked goal results in the causee being marked by the preposition *par* instead.²²

- (60) *French: ban on two DAT-marked IOs*
- je ferai écrire une lettre au directeur **par** Jean
1SG make.1SG.FUT write.INF a letter to headmaster PREP Jean
'I shall make Jean write a letter to the headmaster.'
- (Dixon, 2000)

We therefore find yet another parallel between morphological case on nominals and the clitic paradigms in Yimas. In both systems, a single morphological form may exhibit different behavioural properties, depending on the kind of nominal or clitic it marks. Additionally, we arrive at a unified reason for why both lexical DAT-marked nominals and set C_{PART/POSS} clitics are invisible to the morphosyntactic processes triggering dependent case or set B and C_{DEP}: in both cases, the nominal or clitic is simply outside of the relevant domain of morphological rule application. Assuming that lexical case is assigned by Merging P⁰ to a nominal (McFadden, 2004; Preminger, 2011, 2014) and that (some) P⁰'s are phasal, locality conditions on phasehood prevent PP-internal nominals from being accessible to processes external to the phase. Similarly, set C_{PART/POSS} clitics in Yimas are invisible to morphological rules targeting clitics in the CP-domain.

5.5 Summary

Whereas in §4 I demonstrated that Yimas exhibits morphological alternations within its clitic system, this section demonstrated that nominals also display morphological alternations—*this is, I argue, dependent case*. Just as set B and set C in Yimas are sensitive to the number of clitics on C⁰, ERG and DAT case were shown to have parallel distributions on nominal arguments in the sentence-level syntax. On this basis, I suggested that both systems exhibit context-sensitive morphological alternations in different structural domains. That this general pattern ranges across both systems strongly suggests that they are separate instantiations of a single phenomenon—the topic of §6.

²²This is amenable to a dissimilation-based story, if we take the ban on multiple DAT-marked arguments to arise from anti-identity considerations. However, according to Dixon (2000), it is also possible for French speakers to mark both the goal and the causee with dative *à*, though the preferred construction is the one provided here.

6 A dissimilation-based account

6.1 Overview

In this section, I argue that both dependent case on nominals and the clitic alternations in Yimas are *domain-specific instantiations of morphosyntactic dissimilation*. The need to dissimilate, in turn, comes from a universal wellformedness condition, which I will refer to as **Anti-Identity**, requiring that all elements in some local domain be featurally distinct from one another. Following Richards (2010), I suggest that this condition is driven by considerations on linearization. The basic idea pursued in this section is that the appearance of set B and C morphology on the Yimas clitics and the assignment of dependent case both result in the dissimilation of otherwise indistinguishable elements.

More generally, this section addresses why languages make use of dependent case systems in the first place, an aspect of dependent case theory that has remained generally unexplored. The idea put forth in this paper converges with Baker's (2015) suggestion that dependent morphological case functions to differentiate nominals. Once again, Yimas provides novel empirical evidence for this idea. I propose that, in Yimas, the morphological alternations on the clitics are driven by the need to avoid sequences of multiple set A clitics. Given the parallels between the clitic alternations and dependent case, we may thus conclude that dependent case is also subsumed by the broader phenomenon of dissimilation.

This section is organized as follows. In §6.2, I discuss the status of the set A paradigm, and argue that set A is simply the default realization of a doubled clitic in the absence of set B and C morphology. This accounts for the morphological similarity between set A and the independent pronouns of the language, and additionally allows us to view the application of the set B and C rules in a new light. In §6.3, I extend the findings of the previous section to dependent case, and suggest, following Kornfilt and Preminger (2015), that ABS case is the absence of case assignment. Finally, in §6.4, I return to Yimas and discuss some further arguments for dissimilation among the clitics on C^0 .

6.2 Dissimilating multiple set A clitics

Earlier, I characterized the set A clitic paradigm as having an elsewhere distribution, surfacing precisely where the morphological rules effecting the sets B and C forms are unable to apply. This section explores the nature of the set A paradigm in greater depth and uses this exploration to provide new insights into why the morphological rules exist in the first place.

Our starting point is a key property of the clitics that was first introduced in §2. Recall that both clitics and pronouns were taken to be spell-outs of ϕ -feature-bearing D^0 s, accounting for the morphological identity between the set A clitic paradigm and the independent pronouns of the language. This is repeated in (61).²³

(61) *Identity between set A and pronouns*

	1sg	1dl	1pl	2sg	2dl	2pl	3sg	3dl	3pl
Set A	ama-	kapa-	ipa-	ma-	kapwa-	ipwa-	na-	impa-	pu-
Pronoun	ama	kapa	ipa	mi	kapwa	ipwa	na	impa	pu

I propose that we should treat all doubled clitics as being ‘born’ as set A—a set A form being the default spell-out of a ϕ -bearing D^0 —but in certain circumstances these clitics are realized instead with set B or C morphology. Under this treatment, we must ask what triggers set B and C on the clitics, or, in other words, why these clitics are unable to remain set A. The fact that the clitics may surface as set B and C at all is surprising from the point of view that clitic doubling is derived by ϕ -feature copying via Agree. As (62) demonstrates, the R-expressions and uncliticized pronouns of Yimas are always morphologically unmarked (unless oblique), regardless of their grammatical function or thematic role. Yet, the form of the clitic and the form of the pronoun do not always match, as shown in (62b-c). That non-set A clitics

²³Although there is no fundamental syntactic difference between the set A clitics and pronouns under my analysis (perhaps aside from their surface position), I will continue to refer to the clitics as ‘set A’ for ease of exposition.

surface despite our theory’s prediction that clitic doubling should always by default output a set A clitic suggests that the clitics may in certain circumstances be *prevented* from being realized with their default morphology. Why must a doubled clitic be realized as set B or C, rather than set A?

(62) *Sentence-level pronominals are invariant*

a. **kapwa** taŋka-mpi **kapwa**-wa-t
2DL where-ADV **2DL.A**-go-PERF
 ‘Where have you gone?’ (*Intrans. subject*) (F458)

b. **kapwa** na-ŋkran-a-aykapiŋa-n
2DL 3SG.ABS-**2DL.B**-DEF-know-PRES
 ‘Do you two know him?’ (*Trans. subject*) (F462)

c. **kapwa** ŋkut-ŋa-ira-kwalca-kia-k
2DL **2DL.C**-DEF-ALL-rise-FUT-IRR
 ‘I will come up on you.’ (*Applied object*) (F460)

I propose that the set B and C forms are *fundamentally dissimilatory*. Specifically, the morphological rules effecting set B and C morphology on the clitics is a dissimilatory response to avoid the cooccurrence of multiple set A (default) clitics on C^0 . Sequences of set A clitics are banned because they are morphosyntactically indistinguishable from one another (more on this shortly), and are thus realized with alternate forms in order to resolve this issue. I posit that the constraint against multiple set A clitics in Yimas is a clitic-specific instance of a more general constraint against featurally identical or non-distinct elements, which I will refer to as ANTI-IDENTITY. This constraint is defined in (63):

(63) ANTI-IDENTITY: All elements of a given type within some morphosyntactic domain D must be morphosyntactically non-identical to one another.

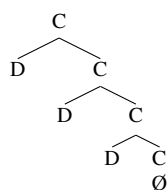
While it has been shown that dissimilation takes place pervasively across languages and within different modules of the grammar,²⁴ within the syntactic and postsyntactic components it has been discussed by Grimshaw (1997), Ackema (2001), Walter (2007), Richards (2010), Nevins (2012), and many others. Richards (2010) characterizes the anti-identity constraint as motivated by considerations on linearization; this constraint applies to elements within a spell-out domain or syntactic phase. The idea is that linearization statements such as $\langle \alpha, \alpha \rangle$, where the elements being linearized are two non-distinct nodes, cannot be interpreted; dissimilation takes place in order to create non-contradictory linearization statements.

I suggest that the Yimas clitic system may also be subject to the Anti-Identity constraint due to linearization considerations. As schematized throughout (64), the relative order of clitics on C^0 after m-merger is established with a linearization algorithm (rather than simply derived from the hierarchical order of the clitics themselves). Since the clitic complex on C^0 consists of a series of ϕ -bearing D^0 s, any linearization statement that could be generated would be $\langle D, D \rangle$ —hence, unlinearizable.²⁵ However, this is resolved by realizing the clitics with set B and C morphology.

²⁴Within the phonological component, for instance, the Obligatory Contour Principle (OCP) was proposed as a restriction on consecutive identical phonological features (Leben, 1973; Goldsmith, 1976; McCarthy, 1986); constraints in the spirit of (63) have also been proposed to account for dissimilatory phonological phenomena more generally. See Bennett (2013, 2015) for a recent survey.

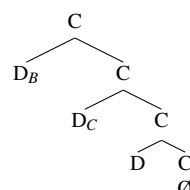
²⁵I assume, again following Richards (2010), that what constitutes two distinct nodes might differ across languages. Whereas in English the statement $\langle DP, DP \rangle$ leads to a derivation crash under his system, Distinctness in other languages may reference more articulated features such as case and ϕ -features. I suggest, however, that Yimas is somewhat like English, in that the linearization algorithm cannot distinguish between nodes of a given category, even if they differ in their ϕ -specifications.

(64) a. *Unlinearizable structure:*



Linearization statements:
 $\langle D, D \rangle, \langle D, D \rangle, \langle D, D \rangle$

b. *Linearizable structure:*



Linearization statements:
 $\langle D, D_B \rangle, \langle D, D_C \rangle, \langle D_B, D_C \rangle$

Only after the clitics are sufficiently differentiated is the linearization algorithm able to successfully apply. I suggest, returning to a point briefly made in §2.1, that this is how Yimas' strict A-B-C linear clitic order is derived.

The dissimilation-based approach to the clitic morphology explains a number of additional properties regarding the distributions of the set B and C forms. For example, it explains why these forms surface only in the presence of multiple doubled clitics on C^0 ; at least two clitics need to be present for ANTI-IDENTITY to be violated (ANTI-IDENTITY is vacuously satisfied if only one clitic is present). Moreover, it allows us to understand why, once a clitic is marked as set B or C, it cannot subsequently condition the realization of set B or C morphology on another clitic;²⁶ this is because the dissimilatory rules are activated by two *identical* elements.

In the next two subsections, I extend the scope of the ANTI-IDENTITY constraint in two directions. In §6.3, I propose that dependent case systems are also fundamentally dissimilatory and also exist to satisfy ANTI-IDENTITY, and in §6.4 I describe further effects of this constraints on the clitics on C^0 .

6.3 Dependent case is dissimilation

In §5, I showed that the distributions of set B and C in Yimas match the distributions of dependent case cross-linguistically; both set B and ERG case are realized on the higher of two elements, while both set C and DAT case are realized on the intermediate of three elements. Given the extent of the correspondence between these two systems, we should be able to extend our treatment of set A to ABS case, and our dissimilation-based approach to dependent case more generally.

I begin by discussing ABS case in light of these other parallels. Within dependent case theory, ABS case is *unmarked case*, surfacing on nominals that fail to receive lexical or dependent case; thus, ABS case is the analogue of the set A paradigm, when instantiated on nominals rather than clitics. Moreover, just as the set A clitic paradigm was taken above to be a morphological default (surfacing in the *absence* of morphological rules operating over the clitics), I propose that NOM/ABS is similarly the *absence of case*, following Kornfilt and Preminger (2015) (see also Bittner and Hale, 1996, Levin, 2015). This treatment essentially says that what we call 'NOM' or 'ABS' is really a label for nominals that do not receive case at all within the dependent case system; this automatically derives the elsewhere distribution of NOM/ABS, as well as the cross-linguistic tendency for such nominals to be morphologically unmarked. This also further extends the parallel between the Yimas clitic system and the dependent case system, given our similar treatment of the set A clitic paradigm.

Note that this view of NOM/ABS contrasts with a subtly different analysis that takes NOM/ABS to be *assigned* to any nominal that does not receive a morphological case (cf. Marantz, 1991). However, Kornfilt and Preminger (2015) provide various arguments in support of the caselessness approach. Earlier, we saw that embedded subjects in Sakha may receive dependent ACC case upon A-movement into the matrix clause, even if the matrix predicate is intransitive. The relevant example is repeated in (65).

²⁶Within the dependent case theory of Marantz (1991), this is when a nominal leaves the case competition once it receives a particular morphological case.

- (65) *Sakha: Raised ACC subjects control verbal agreement in embedded clause*
 min **ehigi-ni** [бүгүн кыај-ѧах-**xyt** dien] erem-mit-im
 I **you-ACC** today win-FUT-**2PL** that hope-PST-1SG
 ‘I hoped you would win today.’ (Vinokurova, 2005)

Crucially, raised ACC subjects are able to control subject agreement on the embedded verb (in (65), this is the 2PL morpheme *-xyt*), suggesting that the ϕ -probe in the embedded clause is valued prior to A-movement of the subject. While it is unsurprising that the raised nominal is able to agree with the downstairs verb, given that it originates within the embedded clause, what *is* perhaps surprising is the fact that we see agreement with an ACC-marked nominal. Crucially, Sakha generally only exhibits agreement with nominative arguments. Based on this, Kornfilt and Preminger (2015) conclude that, logically, the embedded subject must be NOM in the embedded clause prior to moving into the matrix clause. However, they also show that a case stacking approach (as pursued by Baker and Vinokurova (2010)) makes some unappealing—and incorrect—predictions.²⁷ The solution, they suggest, is that NOM is the *absence of case* entirely, and that *caseless* nominals control agreement. In the example above, the embedded verb agrees with a caseless nominal, which receives case for the *first and only time* after A-movement.

Importantly, if this is the correct approach, then the Yimas clitic system and the dependent case system converge on a common treatment of the ‘unmarked form’—in both systems, this form is simply the default form of an element in the absence of any additional morphosyntactic processes.

This, in turn, casts the nature of dependent case theory in a new light. It moves away from the notion of ‘case competition’ between nominals (Marantz, 1991), such that all nominals receive case based on a case-assigning hierarchy. Rather, nominals *remain caseless* unless otherwise required. Moreover, the current approach recharacterizes dependent case as part of a more global pattern, which I will refer to as *configurationally-determined morphosyntactic differentiation*, defined as in (66). ERG-ABS systems (including Yimas) make use of the rules in (a) and (c), while NOM-ACC systems make use of the rules of (b) and (c).

- (66) *Configurationally-determined morphosyntactic differentiation*
- a. *Upwards differentiation:*
 An element α is realized as δ if it c-commands an element β of the same type within a local syntactic domain.
 - b. *Downwards differentiation:*
 An element α is realized as δ if it is c-commanded by an element β of the same type within a local syntactic domain.
 - c. *Intermediate differentiation:*
 An element α is realized as ε if it c-commands an element β and is c-commanded by an element γ , both of the same type as α .

Dependent case assignment is thus one of many strategies that languages make use of to differentiate between otherwise non-distinct nominals in the syntax.²⁸ Here, again, I refer to Richards (2010), who discusses these different strategies extensively. The idea that languages display various ways to dissimilate nominals is a precursor to §6.4 below, in which we find a variety of different dissimilatory

²⁷For example, Kornfilt & Preminger point out that, under a case-stacking approach, the embedded subject must receive NOM case in the lower clause and then receives dependent ACC case in the matrix clause. This is, according to them, a problematic treatment for conceptual reasons, since this means that dependent case can be assigned to nominals that already receive case; this is contrary to the standard view that *caseless* nominals are in competition to receive dependent case and leave the case competition upon receiving case.

²⁸We might ask, given the current discussion, how Differential Case Marking fits into the picture. Pesetsky (2007) suggests that Differential Object Marking may be an instance of dependent case as well; similarly, Coon and Preminger (to appear) present a dependent case account of Differential Subject Marking. We may connect this to the dissimilation-based treatment of dependent case, under the assumption that certain features may not be visible to the linearization algorithm in a particular language; as a result, nominals bearing such features need to be case-marked.

effects may appear on clitics as well. This supports the paper’s dissimilation-based treatment of the paradigmatic alternations on the clitics, since these other effect appear in the same contexts.

6.4 Clitic-specific dissimilation

Back in §4.2, I discussed certain morphological effects on the shape of the Yimas clitics when the complementizer on C^0 is overt rather than null. A (non-exhaustive) list of the complementizers is given in (67):

- (67) *Yimas complementizers*
- a. *ka-* ‘likelihood’
 - b. *ant-* ‘potential’
 - c. *ta-* ‘negation’
 - d. *m-* ‘relativizer’
 - e. $\emptyset \sim naŋ \dots -n$ ‘imperative’
 - f. *apu-* ‘negative imperative’

Though in Foley (1991) these morphemes are described as ‘modality prefixes’; I follow Phillips (1993, 1995) in taking them to be complementizers in C^0 . When present, they are always word-initial, thus yielding the morpheme order COMP-AGR-VERB.

As mentioned, these complementizers trigger a number of effects on the doubled clitics. There are (as far as I can tell) four different effects that may surface, as illustrated throughout (68b-e). In (68a), the baseline construction, there is no overt complementizer, and the subject clitic is set A. However, in (68b), the same clitic is realized as set B in the presence of the complementizer *ka-* ‘likelihood.’ In (68c), there is no preverbal set A clitic at all (though there is a suffix in all of the examples in (b)-(e) that encodes the number feature of the affected clitic). In (68d), the 3rd person singular clitic remains set A, but is realized as *pu-*, which happens to be identical to the 3rd person plural set A form. Foley characterizes this as a morphologically default form; I adopt this view and take this as an instance of impoverishment.²⁹ Finally, in (68e) the set A form remains unchanged, but the complementizer (originally *ant-*) surfaces with a reduced form, *a-*.

- (68) *Effects triggered by overt complementizers*
- a. **pu-ŋa-tay**
3PL.A-1SG.C-see
‘They saw me.’ (*baseline*) (F196)
 - b. **ka-mpu-ŋa-tput-n**
LIKE-3PL.B-1SG.C-hit-PRES
‘They are going to hit me.’ ($\rightarrow B$) (F266)
 - c. **ant- \emptyset -ŋa-tpul-c-um**
POT-3PL-1SG.C-hit-PERF-PL
‘They almost hit me.’ ($\rightarrow \emptyset$) (F264)
 - d. **ta-pu-wa-t**
NEG-3-go-PERF
‘He didn’t go.’ (\rightarrow *impoverished*) (F258)

²⁹While the plural feature is often asserted to be more marked than the singular feature (e.g. Harley and Ritter, 2002; Nevins, 2011), this is based on the featural geometries of plural and singular respectively. I assume that plural *could* be, in principle, less marked than the singular, if this could be plausibly built into the featural makeups of the language’s number system. I leave this for future research.

- e. \boxed{a} -**pu**-tmuk-r-**um**
 \boxed{POT} -**3PL.A**-fall-PERF-**PL**
 ‘They almost fell down.’ (*ant-* → *a-*) (F197)

The choice between one of these effects on a given clitic is for the most part idiosyncratic. However, certain patterns emerge as well. The complementizers in (67d-f) always trigger deletion of the adjacent clitic (the process exemplified in (68c)), regardless of the transitivity of the verb or the total number of clitics present. The ones in (67a-c), however, trigger multiple processes, depending on the exact complementizer being used as well as the combined feature specifications of the clitics on C^0 . For example, the complementizer *ta-* ‘negation’ triggers three different effects, as shown below:

(69) *Negation triggers various effects on adjacent clitics*

- a. \boxed{ta} - \boxed{ka} -wa-t
 \boxed{NEG} - $\boxed{1SG.B}$ -go-PERF
 ‘I didn’t go.’ (→ *B*) (F251)
- b. \boxed{ta} - $\boxed{\emptyset}$ -**mpu**-tpul-c- \boxed{rm}
 \boxed{NEG} - $\boxed{3DL}$ -**3PL.B**-hit-PERF- \boxed{DL}
 ‘They didn’t hit those two.’ (→ \emptyset) (F255)
- c. \boxed{ta} - \boxed{pu} -wa-t
 \boxed{NEG} - $\boxed{3}$ -go-PERF
 ‘He didn’t go.’ (→ *impoverished*) (F258)

A full account of the morphological environments triggering each of the four effects is beyond the scope of his paper. Rather, I concentrate on how these effects contribute to our broader understanding of clitic dissimilation. As will be discussed below, these effects are all dissimilatory in nature, thus providing further evidence for the Anti-Identity condition.

This treatment contrasts somewhat with a previous analysis developed by Phillips (1993, 1995), who treats them as a response to a requirement he calls the *Yimas EPP*, which may be satisfied by either a set A clitic or a complementizer. This requirement overrides the other rules determining the forms of the clitics, thus explaining why every verb has either a set A prefix or a complementizer, but not both. If a complementizer satisfies the *Yimas EPP*, there is no longer a need for a set A prefix; thus, the agreement morpheme may surface as set B instead or disappears altogether. While I adopt the core insights of Phillips’ analysis—namely, that a complementizer and a set A element are the ‘same’ and hence compete in some sense—I argue that the dissimilation-based approach pursued here allows us to form a slightly different, and novel, generalization about the complementizer-clitic interactions shown throughout this section.

First, we saw in (68d-e) that, contrary to Phillips’ analysis, a set A form *may* in fact co-occur with a complementizer, so long as one or the other is *morphologically reduced*.³⁰ These examples are given again in (70):

(70) *Set A and complementizer co-occurrence requires morphological reduction*

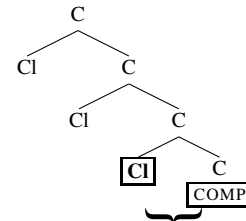
- a. \boxed{ta} - \boxed{pu} -wa-t
 \boxed{NEG} - $\boxed{3}$ -go-PERF
 ‘He didn’t go.’ (→ *impoverished*) (F258)
- b. \boxed{a} -**pu**-tmuk-r-**um**
 \boxed{POT} -**3PL.A**-fall-PERF-**PL**
 ‘They almost fell down.’ (*ant-* → *a-*) (F197)

Moreover, only the lowest clitic on C^0 (regardless of grammatical function) is ever affected by the com-

³⁰While the effects cannot be explained under his system, the examples are mentioned.

plementizer. This suggests that the process triggered by the presence of the complementizer is extremely local, operating on structural adjacent units. I propose that the local nature of these effects is suggestive of contextual allomorphy as applied between sister nodes. When an overt C^0 enters into a sisterhood relationship with a doubled clitic in the postsyntax, one of four different allomorphic processes applies to either the complementizer or the adjacent clitic. This is summarized in (71).

- (71) *Generalization on complementizer-clitic interactions:*
 Given a syntactic constituent consisting of an overt complementizer in C^0 and its sister, a doubled clitic, one or the other must be morphologically altered (a-b).



Why do these allomorphic processes apply? A key fact (not noted by Phillips 1993, 1995) is that all of these effects are cross-linguistically attested as dissimilatory (I will return to the set $A \rightarrow B$ effect shortly). To capture this generalization, I propose that, just as multiple set A clitics are indistinguishable, so are sequences consisting of a set A clitic and an overt complementizer. While it is not immediately obvious why the grammar might regard these elements as non-distinct in the first place, it is also non-coincidental that the particular effects that we see happen to be attested dissimilatory strategies.

For instance, a well-known example of dissimilatory impoverishment is seen in the Spanish *spurious se* effect (Perlmutter, 1971; Bonet, 1991; Nevins, 2007), a ban on co-occurring DAT and ACC clitics that impoverishes the DAT clitic into reflexive *se*. This is shown in (72). Additionally, the deletion of an entire morpheme is also attested as a general dissimilatory repair. Arregi and Nevins (2012) show that certain varieties of Basque exhibit *participant dissimilation* (an effect also exhibited in many other languages), such that the language bans certain combinations of two sequences of [PARTICIPANT] features. In the Ondarru dialect of Basque, participant dissimilation effect is resolved by deleting a 1PL dative or absolutive morpheme in the presence of a 2nd person ergative morpheme. This is illustrated in (73).³¹

- (72) *Spanish: Spurious ‘se’ effect derived by impoverishment*

- a. *A Pedro, el premio, **le** **lo** dieron ayer
 to Pedro the prize 3SG.DAT 3SG.ACC gave-PL yesterday
Intended: ‘To Pedro, the prize, they gave it to him yesterday.’
- b. A Pedro, el premio, **se** **lo** dieron ayer
 to Pedro the prize **SE** 3SG.ACC gave-PL yesterday
 ‘To Pedro, the prize, they gave it to him yesterday.’ (Nevins, 2007)

- (73) *Ondarru Basque: Participant dissimilation resolved by deletion*³²

- a. *Su-k **gu-ri** liburu-∅ emo-∅ d-o-**ku**-su (>skusu)
 you(sg)-ERG **us-DAT** book-ABS give-PRF L-PRS.3.SG-CL.D.1.PL-CL.E.2.SG
Intended: ‘You have given us the book.’
- b. d-o-su (>su)
 L-PRS.3.SG-CL.E.2.SG
 ‘You have given us the book.’ (Arregi and Nevins, 2012)

³¹Arregi & Nevins also discuss how different varieties of Basque display minimally different effects with regard to participant dissimilation. For instance, the Zamudio dialect allows deletion of 1PL dative *and* ergative morphemes, when a 2nd person clitic of the opposite case (ERG or DAT) is present. Interestingly, the bidirectionality of this effect is paralleled in Yimas, as we saw above in the Impoverishment cases that *either* the complementizer or the doubled clitic may be affected.

³²Following the convention in Arregi & Nevins (2012), the auxiliaries in the Ondarru Basque data are presented with their underlying forms to make clear the participant dissimilation effect; the surface forms are given in parentheses.

The Ondarru Basque forms presented here are the underlying forms proposed by Arregi & Nevins (2012), to make clear the participation dissimilation effect taking place on the auxiliary. The surface forms are given in the parentheses.

Returning now to the effect yielding set B on the complementizer-adjacent clitic, we now find *two* configurations that result in this effect. The realization of a clitic as set B may take place via an upwards-oriented morphological rule affecting the higher of two doubled clitics, or it may be triggered on the sister of an overt C^0 (note that, in the latter case, the clitic and the complementizer symmetrically c-command each other). That this effect takes place in the presence of a complementizer is important for our broader dissimilation-based story. The realization of a clitic as set B is *one of four* different processes that may take place when a complementizer is present. That the other three processes have been attested across languages as dissimilation strategies suggests that the realization of set B is also dissimilation-based. I thus take all of these effects as being motivated by the need to satisfy ANTI-IDENTITY.

6.5 Summary

I argued that the morphological rules affecting the set B and C forms on the doubled clitics are fundamentally dissimilatory in nature—and, relatedly, that the assignment of dependent case also serves a dissimilatory function, building on an idea from Baker (2015). I proposed a general constraint (ANTI-IDENTITY) which manifests in different ways across languages—in Yimas, it militates against multiple featurally non-distinct clitics on C^0 ; in other languages, it triggers morphosyntactic effects on non-distinguishable nominals. I proposed that dependent case assignment is one of many strategies that languages may use to differentiate between nominals, while multiple kinds of effects may also apply within the clitic context. Evidence for the latter part comes from the behaviour of the Yimas doubled clitics when structurally adjacent to an overt complementizer. I showed that various different effects take place, and that these effects are notably attested as dissimilatory across languages; that realizing a doubled clitic as set B is one of such effects thus furthers the claim that sets B and C surface to dissimilate.

7 Conclusion

In this paper, I demonstrated that the distributions of dependent morphological case exactly parallel the distributions of morphological paradigms within the clitic system of Yimas. That both systems display the same morphological patterns strongly suggests the existence of some broader principle that is reflected in both systems. I identified this principle as an *anti-identity condition*, requiring that all elements within some local domain be sufficiently morphosyntactically distinct. Both dependent case assignment and the morphological rules for paradigm sets B and C are dissimilatory responses that take place so that the anti-identity condition is satisfied.

From a language-internal standpoint, this paper has offered a comprehensive analysis of the case and agreement system of Yimas and demonstrated that, despite the system's morphological complexity (and, in some cases, idiosyncrasy), systematicity is revealed upon closer examination. More generally, the analysis presented within the paper provides novel and straightforward evidence for the dependent theory of case assignment (and against other means of case assignment), as well as addresses the question of why such a system exists at all. Dependent case is, under the present approach, reconceptualized as a subtype of a much broader phenomenon that *may* be instantiated on a set of nominals in the syntax, though not limited to it.

On a theoretical front, the analysis presented within the paper provides novel evidence for the dependent theory of case assignment (and against other proposals for case assignment), while addressing the question of why such a system exists at all.

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