Dependent case and clitic dissimilation in Yimas*

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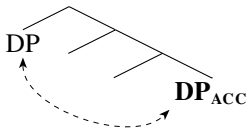
Baker (2015) suggests that the dependent theory of case (Marantz 1991, a.o.) is a formulation of the intuition that morphological case functions to differentiate nominals. This paper presents novel evidence for this idea from the agreement system of Yimas. Departing from previous characterizations of the language, this paper argues that the Yimas agreement morphemes are actually doubled pronominal clitics, and that they exhibit paradigmatic alternations that parallel the distributions of dependent case on nominals crosslinguistically. Crucially, clitic doubling in Yimas is optional; once this is taken into account, it is revealed that 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 realized is thus dependent on its clitic environment. This context-dependence is analyzed as a dissimilation process, which applies to distinguish between multiple morphosyntactically indistinguishable clitics; this arises whenever multiple DPs are doubled. Thus, both clitic dissimilation in Yimas and dependent case on nominals can be viewed as alternations that are controlled by morphosyntactic context, albeit in different structural domains.

1 Introduction

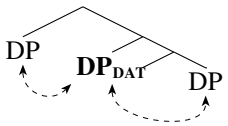
According to the theory of dependent case developed in Yip et al. (1987), Bittner and Hale (1996b), and especially Marantz (1991), morphological case assignment is determined by a nominal's structural position relative to other nominals, rather than relative to a functional head. This system takes ergative case to be assigned to the higher of two arguments within a local domain of case assignment, (1a), and accusative case to be assigned to the lower of two such arguments, (1b). Additionally, dative case has also been analyzed as dependent, assigned to the intermediate of three DPs, (1c) (Harley, 1995; Folli and Harley, 2007; Podobryaev, 2013).[1] Since dependent case assignment only references c-command relations between arguments, its distribution is 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.).

(1) a. **ERG: higher of two DPs**

b. **ACC: lower of two DPs**



c. **DAT: intermediate of three DPs**



This paper provides novel support for dependent case theory and argues for a reinterpretation of the logic behind the theory, based on a new analysis of the agreement system of Yimas, a Papua New Guinean language from the Lower Sepik language family. Yimas is, at first blush, an unlikely source of insight into dependent case theory, which is usually discussed in the context of nominals rather than agreement morphology; moreover, characterizing

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[1] Others have also proposed that DAT case is dependent, but not assigned to a syntactically intermediate argument. For example, Baker and Vinokurova (2010) and Baker (2015) take dependent DAT to be assigned to the higher of two arguments within a VP phase.

the Yimas agreement system in this way is a radical departure from certain previous analyses of the language (Foley 1991; Phillips 1993, 1995; Harbour 2003; Woolford 2003, though see Wunderlich 2001). However, I argue that not only does the current approach provide greater empirical coverage, it also provides novel insights into the logic of dependent case *precisely because* it has never before been investigated through the lens of an agreement system.

I show that the Yimas agreement morphemes, which are analyzed here as doubled pronominal clitics rather than ϕ-agreement heads, exhibit paradigmatic alternations mirroring the distribution of dependent case. The core evidence for these alternations comes from the fact that these morphemes are *optional*, subject to discourse-prominence considerations—as expected if they are the products of pronominal clitic doubling. Strikingly, a comparison between 'full' and 'partial' clitic doubling patterns reveals that the morphological form of a given clitic varies with the *total number of clitics present*, even when the sentence-level syntax is held constant, (2):

(2) **Morphological alternations on Yimas clitics**[2]

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

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

In both examples above, 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. The clitic crossreferencing the 3SG causee is realized with the DAT form *-akn* in (2a) but is realized with the ABS form *na-* in (2b). Thus, the morphological form of a given clitic is dependent on the presence of other clitics in the same clitic sequence. This is in essence a *dependent case pattern* within a clitic cluster: both the clitic forms in Yimas and dependent case patterns on nominals across languages display a sensitivity to morphosyntactic context. 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.

Despite the recent influx on research on dependent case theory,[3] it remains generally unexplored within this literature *why* languages make use of such a system. The only explicit discussion I am aware of comes from Baker (2015), who characterizes dependent case theory as a generative sharpening of the functionalist idea that morphological case exists primarily to distinguish between nominals of different grammatical functions (Comrie, 1978; Haspelmath, 2008). Building on this intuition, I propose that both the morphological alternations on the Yimas clitics and dependent case on nominals are fundamentally dissimilatory. This is driven by a universal well-formedness condition requiring that all elements within some local domain be featurally distinct from one another (cf. Grimshaw, 1997; Richards, 2010). I suggest that Yimas provides the core evidence for this dissimilation-based treatment: the case alternations on the clitics can be analyzed as strategies to order to avoid sequences of otherwise invariant clitics (cf. Wunderlich, 2001), a problem that arises from the morphological invariance of the DPs they double. Extended to dependent case systems of other languages, this provides support for Baker's (2015) idea. Therefore, what we typically call 'dependent case' is dissimilation applied to nominals at the sentence level, whereas in Yimas the relevant domain of dissimilation is the clitic cluster.

This paper is organized as follows. §2 provides an overview of the case/agreement system in Yimas, and

[2]Throughout the paper, all agreement morphemes and glosses in the Yimas data will be *italicized*, while individual morphemes that are particularly salient to the present discussion will be ***additionally bolded***. The following abbreviations are used in the Yimas data: ABS = absolutive, ACC = accusative, ADV = adverbial, ALL = allative, CAUS = causative, COM = comitative, COMP = clausal complement, DAT = dative, DEF = definitive, DEM = demonstrative, DL = dual, DUR = durative, FR.DIST = far distal, FUT = future, ERG = ergative, HAB = habitual, IRR = irrealis, IV = class 4, IX = class 9, LIKE = likely, NEG = negation, NR.PST = near past, NFN = nonfinite, OBL = oblique, PERF = perfective, PL = plural, POT = potential, PRES = present, PRON = pronoun, PST = past, REL = relativizer, RM.PST = remote past, SEQ = sequential, SG = singular, VI = class 6, VII = class 7, VIII = class 8, X = class 10, 1 = 1st person, 2 = 2nd person, 3 = 3rd person.

[3]See McFadden (2004), Bobaljik (2008), Baker and Vinokurova (2010), Podobryaev (2013), Preminger (2011, 2014), Baker (2014, 2015), Yuan (2018), a.o.

argues that the agreement morphemes under investigation are actually doubled pronominal clitics. In §3, I observe that the distributions of the morphological paradigms in Yimas parallel dependent case patterns on nominals crosslinguistically, and argue that, in Yimas, dependent case is calculated over the clitic cluster, not over nominals at the sentence-level. §4 provides a more explicit comparison between the Yimas clitic system and dependent case systems on nominals crosslinguistically. §5 then extends the discussion to non-dependent instances of case assignment in Yimas. I propose that Yimas clitics may also receive a type of lexical case, which bleeds dependent case assignment. Finally, §6 argues for a unified dissimilation-based account of dependent case.

2 Yimas morphosyntax

All of the Yimas examples presented throughout this paper are originally from William Foley's (1991) grammar of Yimas or personal communication with the author.[4] However, many of the generalizations and conclusions stemming from the data are additionally attributable to later analytical work by other authors (e.g. Phillips, 1993, 1995; Wunderlich, 2001; Harbour, 2003, 2008; Woolford, 2003).

2.1 Overview

Yimas is highly morphologically complex, especially in its verbal system. While word order at the sentence level is relatively free, morpheme order within the verb is rigid. Propositional content may be expressed with verbs alone, as nominals are often omitted. When they are overt, nominals are morphologically unmarked if understood as a core argument (regardless of exact thematic role or grammatical function). As (3) shows, grammatical relations are generally encoded directly on the verb with agreement morphology, rather than on nominals themselves. In contrast to core arguments, oblique arguments are case-marked and cannot be crossreferenced by agreement, (4).

(3) **Core nominals in Yimas are unmarked**

a. *payum* **narmaŋ** **na**- *mpu*- tay
man.PL woman.SG 3SG.ABS- 3PL.ERG- see
'The men saw the woman.' (F193)

b. *payum* **narmaŋ** *pu*- **n**- tay
man.PL woman.SG 3PL.ABS- 3SG.ERG- see
'The woman saw the men.' (F193)

(4) **Core and oblique nominals in Yimas**

a. ***irpm*** ***mu***- *n*- wapal
coconut.palm.IV.SG IV.SG.ABS- 3SG.ERG- climb
'He climbed the coconut palm.'

b. irpm-**un** *na*- wapal
coconut.palm.IV.SG-OBL 3SG.ABS- climb
'He climbed up on the coconut palm.' (F234)

Turning now to the agreement morphology in Yimas, (5a) offers a simplified sketch of the basic surface morpheme order in verb complex, while (5b-d) provide examples illustrating this order. Note that the postverbal number morpheme in (5d) appears primarily in the context of a small set of prefixes encoding mood or negation.

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

Table 1 Agreement paradigms (human referents)

	ABS	ERG	DAT
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

(5) **Surface order of morphemes in Yimas:**

a. (MOD-) (ABS-) (ERG-) (DAT_{PART}-) VERB STEM- (DAT_3)

b. *k-* *mpu-* *ŋa-* tkam- t
VI.SG.ABS- 3PL.ERG- 1SG.DAT- show- PERF
'They showed me it (the coconut).' (F208)

c. *k-* *ka-* tkam- r- *akn*
VI.SG.ABS- 1SG.ERG- show- PERF- 3SG.DAT
'I showed him it (the coconut).' (F211)

d. ta- *pu-* *n-* tay- c- um
NEG- 3(ABS)- 3SG.ERG- see- PERF- PL
'He didn't see them.' (F257)

Foley (1991, p. 200) organizes the Yimas agreement forms into three paradigms indicating grammatical function: S[ubject], A[gent], and O[bject]. I will assume his grouping of the morphemes, though I will relabel the paradigms as ABS, ERG, and DAT cases, respectively, as in Table 1. Each cell encodes both the person (1/2/3) and number (SG/DL/PL) of the nominal being crossreferenced.[5] Only agreement forms encoding human referents are given here; the ABS paradigm additionally makes several noun class distinctions for nonhuman referents, which include animals, objects, and clausal complements (glossed throughout this paper with roman numerals).[6]

The agreement system generally displays an ERG-ABS alignment. Intransitive subjects and transitive objects are both encoded by ABS morphology, while transitive subjects are encoded by ERG morphology, (6a-b). Indirect objects of all persons are encoded by DAT, (6c-d). These data also demonstrate that the agreement morphemes always follow a strict ABS-ERG-DAT order, regardless of the number of morphemes actually present or the surface position of the DAT morpheme.

[5] Yimas also has paucal number, which is realized differently from the others. I will mostly set aside the paucal number system in this paper; see Foley (1991, pp. 216-225), Phillips (1993, pp. 193-195), and Wunderlich (2001, pp.33-34) for discussion.

[6] Noun class distinctions are visible only in the ABS paradigm. When a nonhuman nominal is expressed with the ERG or DAT paradigm, its class is neutralized and it is encoded the same way as human nominals:

(i) a. ***kacmpt*** payum ***ya-*** *mpu-* yamal- wat
canoe.VIII.PL man.PL VIII.PL.ABS- 3PL.ERG- 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.ABS- 1PL.ERG- rub- PERF- 3PL.DAT
'We rubbed ground on the canoes.' (F212)

(6) **Agreement forms track grammatical function**

a. *pu-* wa- t
3PL.ABS- go- PERF
'They went.' (F195)

b. *pu-* *n-* tay
3PL.ABS- 3SG.ERG- see
'He saw them.' (F195)

c. *k-* *mpu-* *ŋa-* tkam- t
VI.SG.ABS- 3PL.ERG- 1SG.DAT- show- PERF
'They showed me it (the coconut).' (F208)

d. *k-* *ka-* tkam- r- *akn*
VI.SG.ABS- 1SG.ERG- show- PERF- 3SG.DAT
'I showed him it (the coconut).' (F211)

While the examples so far show a straightforward mapping of a given paradigm to a grammatical function or thematic role, these mappings often break down. Much work on Yimas has focused on making sense of these divergent patterns.

2.2 Two previous generalizations

Previous literature has observed that the standard ERG-ABS pattern is disrupted in a variety of contexts (Foley, 1991; Phillips, 1993, 1995; Wunderlich, 2001; Harbour, 2003; Woolford, 2003). While two related generalizations have been put forth by these authors to account for these divergences, I will argue that neither is correct.

First, although the Yimas agreement system displays a basic ERG-ABS patterning, Foley (1991) observes that Yimas apparently also exhibits a *person-based ergative split*, which disrupts the ERG-ABS pattern. As shown in (7), when the internal argument is 1st/2nd person (henceforth *participant*), an ABS-DAT pattern arises instead.

(7) **ABS-DAT person-based ergative split pattern**

a. *pu-* *ŋa-* tay
3PL.ABS- 1SG.DAT- see
'They saw me.' (F196)

b. *pu-* *nan-* tay
3PL.ABS- 2SG.DAT- see
'They saw you.' (F198)

c. *ma-* *ŋa-* tay[7]
2SG.ABS- 1SG.DAT- see
'You saw me.' (F206)

The ABS-DAT pattern only surfaces in the presence of a participant *internal argument*. Participant external arguments trigger the expected ERG-ABS pattern, (8).

(8) **Only internal arguments trigger person-split pattern**

a. *pu-* *ka-* tay
3PL.ABS- 1SG.ERG- see
'I saw them.' (F196)

b. *pu-* *n-* tay
3PL.ABS- 2SG.ERG- see
'You saw them.' (F201)

This has led to the following generalization about the Yimas agreement system:

(9) **The Person-split Generalization:** Yimas exhibits a person-based ergative split, with the non-ergative side triggered by a participant internal argument.

If only participant internal arguments are responsible for the alternative case pattern, why is the resulting pattern ABS-DAT rather than ERG-DAT, i.e. how does the internal argument's feature specification affect the external argument's case paradigm? This is addressed by the second proposed generalization about the Yimas agreement system, which is a global statement about the possible combinations of agreement paradigms:

[7]While 2>1 combinations trigger the expected ABS-DAT pattern, in 1>2 combinations either the clitic crossreferencing the 1st person subject must be deleted or the two clitics surface as a portmanteau. See Heath (1998) and Woolford (2016) for crosslinguistic discussion.

(10) **The 'ABS Requirement' Generalization:** Every verbal complex must contain an ABS agreement morpheme (or some equivalent, to be detailed below), which occupies the leftmost slot on the verb.

This overrides the agreement patterns that might otherwise surface. For example, because agreement forms cross-referencing participant internal arguments are obligatorily DAT, the only way to satisfy this requirement is to realize the subject agreement form as ABS rather than ERG, (11). This yields the ABS-DAT person-split pattern.

(11) **The ABS requirement blocks ERG-DAT**

a. ***pu***- *nan*- tay
3PL.ABS- 2SG.DAT- see
'They saw you.' (F198)

b. ****mpu***- *nan*- tay
3PL.ERG- 2SG.DAT- see
Intended: 'They saw you.' (F198)

Finally, Yimas also has a small class of what Foley (1991) calls *modal prefixes*—morphemes that encode modal concepts such as likelihood and possibility, as well as mood and negation. I exemplify this class here with *ta*- 'negation' (underlined below), and will provide a more detailed discussion of these morphemes in §6. Like the ABS paradigm, the modal prefixes strictly occupy the left edge of the verb complex. The presence of a modal prefix also affects the realization of the agreement forms; in the examples below, the expected ABS agreement morpheme is either realized as ERG, as in (12a), or realized as a postverbal number morpheme, (12b).

(12) **Negation triggers loss of ABS**

a. ta- ***ka***- wa -t
NEG- 1SG.ERG- go -PERF
'***I*** didn't go.' (F251)

b. ta- *mpu*- tpul -c ***-rm***
NEG- (~~3DL.ABS~~) 3PL.ERG- hit -PERF -DL
'They didn't hit ***those two***.' (F255)

This suggests that the modal prefixes are in complementary distribution with the ABS paradigm, and that the presence of a modal prefix overrides or disrupts the mechanism responsible for the appearance of ABS agreement morphology. Previous analyses of Yimas often take the modal prefixes and ABS agreement morphemes to form a class in some way, such that the modal prefixes also satisfy the ABS Requirement.

2.3 Problems for the previous generalizations

The two generalizations are repeated as follows:

(13) **Two previous generalizations about Yimas agreement morphemes**

a. Yimas exhibits a person-based ergative split, triggered by a participant internal argument.

b. Every verbal complex must contain an ABS agreement morpheme (or a modal prefix), which occupies the leftmost slot on the verb.

I summarize two prominent analyses of Yimas by Phillips (1993, 1995) and Wunderlich (2001), respectively (a more detailed discussion is given in the attached Appendix). Both take the generalization in (13b) to override (13a), though they differ in their exact implementations. I also present crucial empirical challenges to these proposals, though my own analysis will draw on certain insights by both authors.

For Phillips (1993, 1995), the ABS Requirement is cast as a syntactic licensing (feature-checking) requirement, whose satisfaction is exponed as ABS agreement. Moreover, the modal prefixes may independently check this feature, explaining the absence of ABS agreement in such contexts. This feature-checking requirement overrides and obscures the underlying case paradigms of the agreement forms, resulting in a wider distribution of ABS than expected (e.g. the person-split ABS-DAT pattern).

In contrast, Wunderlich's (2001) analysis is based in an Optimality Theoretic framework. A constraint 'DEFAULT' requires that an ABS morpheme be present in every verb complex (satisfying the ABS Requirement); another constraint 'UNIQUENESS' requires that each paradigm may surface only once per verb complex. These constraints work together to ensure that each verbal complex contains *exactly one* ABS morpheme. The proposal also includes a set of additional constraints to account for the morphological effects that surface in the presence of a modal prefix.

Although these accounts differ in many details, they share an empirical shortcoming: upon closer examination, *neither generalization in (13) holds*. First, the ABS-DAT pattern discussed above is not exclusive to participants, casting doubt on the existence of a person-split in Yimas. As shown in (14b), raised possessors of all persons—including 3rd person—may also trigger the unexpected ABS-DAT pattern.[8]

(14) **3rd person possessors trigger ABS-DAT**

a. narm *p-* ***mpu-*** tpul- kamprak- r- ***akn***
skin.VII.SG VII.SG.ABS- 3PL.ERG- hit- break- PERF- 3SG.DAT
'They hit and broke his skin.' (F283)

b. narm ***pu-*** tpul- kamprak- r- ***akn***
skin.VII.SG 3PL.ABS- hit- break- PERF- 3SG.DAT
'They hit and broke his skin.' (F324)

The example in (14b) additionally shows that the agreement morphology in Yimas is *optional*; the direct object ('skin') is not crossreferenced. Importantly, this optionality shows that Yimas permits constructions *without* ABS *morphemes*, contra the ABS Requirement, as shown in (15). Instead, it is actually the DAT morphemes encoding participant internal arguments and possessors that may not be omitted, as in (16).

(15) **ABS not obligatory; DAT can surface alone**

a. Mitchell ***kra-*** tay
Mitchell 1PL.DAT- see
'Mitchell saw us.' (F,p.c.)

b. narm tpul- kamprak- r- ***akn***
skin.VII.SG hit- break- PERF- 3SG.DAT
'They hit and broke his skin.' (F,p.c.)

(16) **DAT obligatory for participant internal arguments/possessors**

a. ****ipa*** *na-* tay
1PL 3SG.ABS- see
Intended: 'He saw us.' (F,p.c.)

b. *yampaŋ ***ama*** *k-* *mpu-* kra- t
head.VI.SG 1SG.PRON VI.SG.ABS- 3PL.ERG- cut- PERF
Intended: 'They cut my hair.' (F,p.c.)

It is also not possible to use the ABS paradigm to crossreference an argument that should be encoded by DAT, (17). Altogether, these facts present a challenge to the approaches discussed above, as they entail either an exception to Phillips' licensing requirement or a violation of Wunderlich's high-ranked DEFAULT constraint.

(17) **Participant internal arguments must be encoded with DAT**

#Mitchell *ipa-* tay
Mitchell 1PL.ABS- see
Intended: 'Mitchell saw us.' (F,p.c.)
(grammatical only as 'We saw Mitchell.')

[8] Raised possessors in Yimas will be discussed in greater detail in §5.1.

Finally, both previous analyses cannot account for the full range of patterns that surface in the presence of a modal prefix. As detailed in the Appendix, both analyses predict the non-cooccurrence of a modal prefix and an ABS morpheme. However, this is contradicted by examples like in (18):

(18) **Modal prefixes and ABS morphemes may cooccur**

a- ***pu***- tmuk- r- *um*
POT- 3PL.ABS- fall- PERF- PL
'They almost fell down.' (F197)

Ultimately, a more fundamental problem with both previous accounts of Yimas is that they incorrectly hinge on the assumption that ABS agreement morphemes/modal prefixes (or the syntactic positions associated with these morphemes) are privileged or special, in that there is some sort of grammatical pressure for the agreement forms that normally would be realized with ERG and DAT morphology to instead be realized as ABS. However, we have seen in (15)-(16) that this treatment cannot be correct.

I argue that turning this logic on its head will resolve this issue and will yield many new insights about the language: all agreement morphemes are *'born'* ABS, but surface instead as ERG or DAT in particular contexts. Thus, the presence of ABS actually reflects the *failure* of an agreement form to be realized as ERG or DAT, not the other way around. From there, I propose a new account of Yimas that incorporates various aspects of the analysis of both previous accounts. Following Phillips (1993, 1995), I posit that the structural position of ABS is higher than that of ERG and DAT, such that the ABS paradigm is sufficiently local to interact with the modal prefixes. Following Wunderlich (2001), ERG and DAT case are assigned within the clitic cluster to satisfy a UNIQUENESS constraint banning sequences of otherwise identical clitics.

2.4 Pronominal clitic doubling and morpheme order

A core aspect of my analysis is the proposal that the nominal-referencing morphemes are not ϕ-agreement heads (exponing valued ϕ-features), but rather *doubled pronominal clitics*. Though these morphemes fail traditional metrics for clitichood from Zwicky and Pullum (1983) and others, this idea is more consistent with Foley's (1991) original discussion of Yimas, which characterize these morphemes as 'pronominal affixes' (cf. Jelinek, 1984).[9] It is also in the spirit of much recent literature on the ϕ-agreement vs. clitic doubling distinction (Woolford, 2008; Preminger, 2009; Nevins, 2011; Kramer, 2014; Anagnostopoulou, 2016). In contrast to ϕ-agreement, doubled clitics are taken in this literature to be D^0s that bear the features of their DP associates—so doubled clitics are pronouns occurring with coindexed DPs.[10] Treating doubled clitics as pronouns is important for the overall analysis, as it will provide a straightforward way of deriving the defaultness of the ABS paradigm.

2.4.1 Evidence for clitic doubling

I present three pieces of evidence for clitic doubling in Yimas:

- Morphological identity between agreement morphology and pronouns
- Person-Case Constraint effects
- Presence of morphology is optional, sensitive to discourse context

First, the ABS paradigm is nearly identical[11] to the independent pronouns of the language, as shown in Table 2. If doubled clitics are pronominal in nature, then this morphological similarity is to be expected.[12]

[9] The idea that some of the agreement forms in Yimas are pronominal nature is also found in Phillips (1993) and Woolford (2003). However, the present analysis takes *all* of these morphemes to be clitic in nature, not just a partial set.

[10] See Postal (1966), Elbourne (2005), and Stanton (2016) for arguments that pronouns are in fact D^0s.

[11] The 2SG ABS form is *ma-* while its pronoun counterpart is *mi*; this is the only non-identical pair. The rest of the forms are entirely

Table 2 Identity between ABS and independent pronouns

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

Second, Yimas is sensitive to the Person-Case Constraint (PCC), a widely attested constraint which bans certain combinations of indirect object and direct object clitics (Perlmutter, 1978; Bonet, 1991; Anagnostopoulou, 2003; Béjar and Rezac, 2003, a.o.). In Yimas ditransitives, the direct object clitic must be *3rd person* (and ABS) in the presence of a DAT clitic, as in (19a). Participant direct object clitics in such contexts—whether ABS or DAT—are not tolerated (Foley, 1991, pp. 212-214).

(19) **PCC effects in Yimas**

a. *na- mpɨ- tkam- r- akn*
3SG.ABS- 3DL.ERG- show- PERF- 3SG.DAT
'They two showed it to him.' (F212)

b. ****ama-*** *mpɨ- tkam- r- akn*
1SG.ABS- 3DL.ERG- show- PERF- 3SG.DAT
Intended: 'They two showed me to him.' (constructed)

c. **impa-* ***ŋa-*** tkam- r- *akn*
3DL.ABS- 1SG.DAT- show- PERF- 3SG.DAT
Intended: 'They two showed me to him.' (constructed)

However, the most striking evidence for clitic doubling comes from the fact that the morphemes are mostly *optional*.[13] This is discussed by Foley (1991) and mentioned in Harbour (2003), but is otherwise ignored in other literature on Yimas. The optionality of these morphemes is displayed in the examples in (20), which illustrate verbs with *full nominal referencing*, (20a), *partial nominal referencing*, (20b), and *no nominal referencing at all*, (20c). Each example in (20) contains two syntactic arguments but differs in the total number of nominal-referencing morphemes present.

(20) **Full, partial, and no nominal-referencing morphology**

a. kacmpt payum *ya- mpu-* yamal- wat
canoe.VIII.PL man.PL VIII.PL.ABS- 3PL.ERG- carve- HAB
'The men usually carve the canoes.' *(full)* (F228)

b. m-n *impa-* tay -mpi- kwalca- k paympan
DEM.PRON-SG 3DL.ABS- see -SEQ- rise- IRR eagle
'He, the eagle, saw them both and took off.' *(partial)* (F453)

c. num-n-mat Kampramanan wapal- k
villager-OBL-PL place.name climb- IRR
'The villagers climbed Kampramanan.' *(none)* (F233)

The occurrence of these morphemes is sensitive to discourse considerations. As described by Foley (1991, pp.

identical, suggesting that the slightly divergence in the 2SG form might be idiosyncratic, with no bearing on the larger generalization.

[12]Unlike the 1st and 2nd person pronouns, the 3rd person pronouns are bound—they always occur with a deictic suffix indicating promixity or distality, omitted in the table below. There is also another bound 3rd person pronoun form *m*, which has a crossreferencing morpheme equivalent, *m-*. This morpheme triggers idiosyncratic morphological effects on the adjacent nominal-referencing morpheme, suggesting that it is in the same category of the modal prefixes discussed above (Phillips, 1993, 1995).

[13]This optionality only holds for the ABS, ERG, and 3rd person DAT forms crossreferencing indirect objects. As will be shown later, the DAT morphemes that crossreference participant internal arguments and raised possessors are obligatorily doubled.

232–234), these morphemes typically crossreference discourse-established information and are omitted with new information. For example, specifically regarding the example in (20c), Foley (1991) says the following:

> "Thus far, I have been discussing referents which are old or established information and can therefore be indicated by a pronominal affix. What about new information, characters or props now just being introduced in the discourse? These can appear with or without a pronominal affix [...] [(20c)] has an intransitive verb, *wapal-* 'climb', with no pronominal affixes [...] These examples all come from running texts in which these nouns are just being introduced or re-introduced after a longish gap. They are new information." (p. 233)

This is reinforced by (21). In (21a), both the 3SG subject and the embedded clause are crossreferenced.[14] In (21b), however, the embedded clause is not encoded. These two constructions are used in slightly different contexts, reflecting the given vs. new distinction. Per Foley, in (21a) "the intention expressed by the complement has been [previously] stated explicitly" (p. 390), but this is not necessarily the case for (21b).

(21) **Presence of nominal-referencing morphology is discourse sensitive**

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

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

While this behaviour would be surprising if the nominal-referencing morphemes were exponents of genuine ϕ-agreement, it *is* expected for doubled clitics; sensitivity to information-structural notions such as topichood and givenness has been discussed at length in the clitic doubling literature, since these clitics function like pronouns by referring to some element in the discourse (Rudin, 1997; Kallulli, 2000; Anagnostopoulou, 2006, 2016; Harizanov, 2014; Kramer, 2014, a.o.).[15] The rest of this section provides a concrete analysis of clitic doubling in Yimas.

2.4.2 Deriving clitic doubling and morpheme order

Clitic doubling is often argued to involve a syntactic chain between the clitic and its doubled associate. I assume a movement analysis in which the doubled clitic, a D^0, is the head of a movement chain, and clitic doubling is triggered by ϕ-Agree (e.g. Kramer, 2014; Baker and Kramer, 2016; Yuan, 2018).[16] Recall that in Yimas only core (unmarked) DPs may undergo clitic doubling, while oblique DPs may not; only the former are ϕ-accessible in Yimas (Bobaljik, 2008; Preminger, 2011, 2014).

(22) **ϕ-Agree with unmarked nominals**

a. ***irpm*** ***mu-*** *n-* wapal
coconut.palm.IV.SG IV.SG.ABS- 3SG.ERG- climb
'He climbed the coconut palm.'

b. irpm-un *na-* wapal
coconut.palm.IV.SG-OBL 3SG.ABS- climb
'He climbed up on the coconut palm.' (F234)

[14] Yimas possesses two additional doubled clitics that crossreference embedded clauses: roughly, *pia-* for embedded complements encoding speech reports and *tia-* for embedded complements encoding actions.

[15] This optionality is also expected given the diagnostic for agreement vs. clitic doubling developed by Preminger (2009). Preminger argues that the failure to expone ϕ-agreement on a head should result in that head being spelled out as a default agreement form, e.g. 3SG; failure to clitic double an argument should result in the wholesale absence of the clitic. This is precisely what we see in Yimas.

[16] Nothing crucial hinges on this view; the analysis is also compatible with the 'Big DP' analysis of clitic doubling, which takes a clitic to be a D^0 element generated in a complex DP with its associate, prior to its movement up to its host (Torrego, 1988; Uriagereka, 1995; Nevins, 2011).

The locus of clitic doubling is structurally high, in the clausal left periphery. Nonfinite clauses in Yimas (assumed here to be reduced) never host doubled clitics, (23).

(23) **No clitic doubling in nonfinite clauses**

[$_{\text{NFN}}$ patn wayk- ru- mpwi] *pia-* *ka-* i- mpi- cay- c- *mpun*
betelnut.V.SG buy- NFN- COMP COMP.ABS- 1SG.ERG- tell- SEQ- see- PERF- 3PL.DAT
'I tried to tell them to buy betelnut.' (F388)

Against this backdrop, consider how syntactic clitic doubling of DPs eventually yields the ABS-ERG-(...)-DAT linear order of the clitics. We saw in §2.1 that this order is fixed, even if not all of these clitics occur in the same sentence. Delaying discussion of the prefixal participant DAT clitics until §5, let us focus for now on the string given in (24a). I posit that this surface order is derived from the underlying order given in (24b), which reflects the relative structural height of the clitics.

(24) **Clitic order in Yimas (simplified)**

a. Surface: (MOD-) (ABS-) (ERG-) VERB STEM- (**DAT**$_3$)

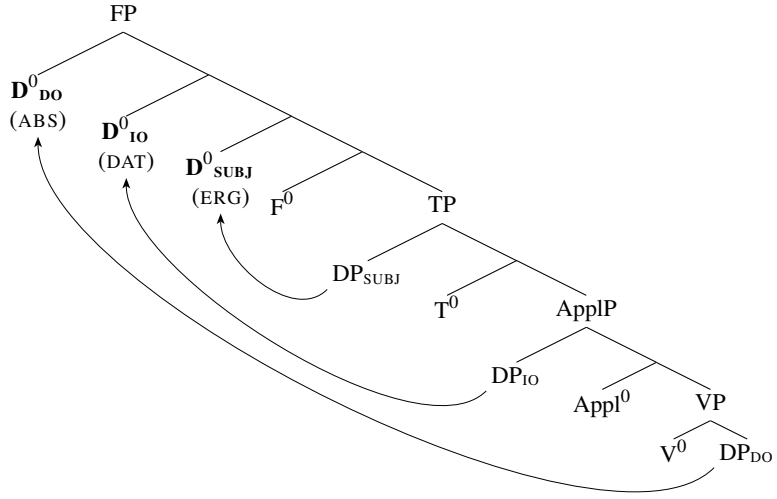
b. Underlying: (MOD-) (ABS-) (**DAT**$_3$-) (ERG-) VERB STEM

I propose that the surface clitic order arises from two factors: (i) nested dependencies in multiple clitic-movement to the left periphery, and (ii) a limited degree of postsyntactic reordering (e.g. the postverbal realization of 3rd person DAT clitics). Therefore, once we control for (ii), the surface order of clitics is the *inverse* of the hierarchical order of DP arguments. This follows if multiple clitic-movement is nesting, as schematized in the ditransitive construction in (25).[17]

(25) **Nested dependencies in Yimas clitic doubling**

a. *na-* *mpi-* tkam- r- *akn*
3SG.ABS- 3DL.ERG- show- PERF- 3SG.DAT
'They two showed it to him.' (F212)

b.



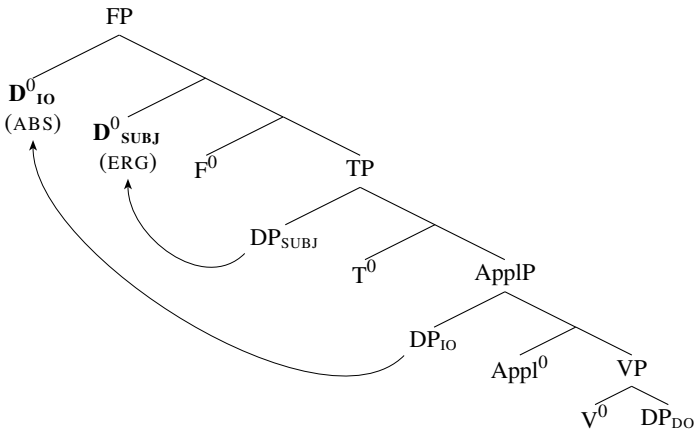
This nested pattern holds regardless of which (and how many) DPs undergo clitic doubling. This is shown in the partial doubling structure in (26).

[17] In contrast, Richards (2001) proposes that multiple syntactic movement should "tuck in," i.e. preserve the hierarchical order of the DPs prior to movement. Nevins (2011) and Harizanov (2014) suggest that the syntactic movement operations involved in clitic doubling should also "tuck in." I assume for now that whether clitic doubling tucks in or not can be parametrized across languages, and leave a deeper investigation of this assumption for future research.

(26) **Nested dependences in partial doubling**

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

b.



While this accounts for why direct object (ABS) clitics are further away from the verb—i.e. structurally higher—than transitive subject (ERG) clitics, more must be said about the intermediate position of the clitic encoding indirect objects (DAT). Evidence that this is the correct analysis comes from the behaviour of the postverbal agreement morphemes in Yimas, as discussed by Harbour (2008). Harbour proposes that this suffixation (which occurs in limited contexts) is postsyntactically *derived* from the prefixal clitics, observing that the linear order of postverbal agreement morphology *perfectly mirrors* that of the preverbal clitics, i.e. they "flank" the verb. According to Harbour, this "flanking" pattern arises because suffixation occurs cyclically and outwards from the verb (bottom-up). We therefore expect ERG-DAT-ABS suffixal morpheme order, if the structure in (25b) is correct.

The examples below show that this is indeed the case. First, (27) provides two environments in which suffixal number morphology surfaces. In (27a), paucal number is jointly expressed with a prefixal clitic and a paucal suffix;[18] (27b) shows that modal prefixes may displace an ABS clitic to a suffixal position. Crucially, (28) demonstrates that, in ditransitives that also contain both a postverbal ABS and ERG number morpheme, the order of suffixes is in fact ERG-DAT-ABS—exactly as predicted.

(27) **Postverbal number morphology in Yimas**

a. *pu-* ***kay-*** cay- c- ***ŋkt***
3PL.ABS- 1PL.ERG- see- PERF- PC(ERG)
'We few saw them.' (F220)

b. ta- *mpi-* tpul- c- ***ak***
NEG- 3DL.ERG- hit- PERF- SG(ABS)
'Those two didn't hit him.' (F255)

(28) **Postverbal morpheme order in Yimas**

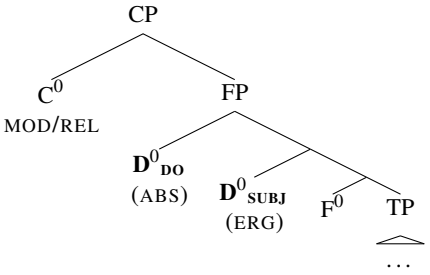
ta- *kay-* ckam- r- ***ŋkan-*** ***mpan-*** ***ŋ***
NEG- 1PL.ERG- show- PERF- PC(ERG)- 3PL.DAT- VI.SG(ABS)
'We few didn't show them it (the coconut).' (F260)

The discussion above takes the ABS clitic to be structurally higher than DAT and ERG clitics—a choice important for §6. Evidence that this is correct comes from the fact that only the ABS clitics interact with other CP-level morphemes, such as the modal prefixes, discussed above. Furthermore, Ā-movement processes that target the CP-domain, such as relativization and wh-movement, contain a clitic that similarly interacts with the ABS clitic

[18] Whether suffixal paucal morphology surfaces depends on the person specification of the prefixal clitic. See Foley (1991, pp. 216-225).

paradigm.[19] Thus, I follow Phillips (1993, 1995) in analyzing these prefixes a complementizers in C^0, and additionally posit that C^0 immediately c-commands the clitic cluster, i.e. immediately c-commands the ABS clitic. This is schematized in (29):

(29) **Structure of Yimas left periphery**



2.5 Section summary

I have argued that DPs in Yimas optionally undergo clitic doubling, which targets a left-peripheral position below C^0. Clitic doubling (as syntactic movement) yields nested dependencies, so that the order of clitics is the inverse of the hierarchical order of DPs; postsyntactic operations may further manipulate their linear order. We have also seen that previous accounts of the distributions of the ABS, ERG, and DAT clitic paradigms face empirical shortcomings, necessitating a new analysis.

3 A dependent case analysis of Yimas

I argue that the distributions of the ABS, ERG, and (3rd person) DAT clitic paradigms are morphological alternations that are determined by the total number of (and types of) clitics present on a verb—and not thematic role. Although often overlooked in the previous literature (even by Foley 1991[20]), these alternations are revealed by factoring in various valency-changing processes as well as the optionality of clitic doubling. The latter is especially crucial to the argument that the morphological alternations are determined *internal* to the sequence of clitics, since they surface even when the sentence-level syntax stays constant. I show the following generalizations:

- Clitics encoding intransitive and transitive subjects may surface as ABS or ERG.
- Clitics encoding 3rd person indirect objects[21] may surface as ABS or DAT.
- 3rd person direct object clitics do not alternate at all, but always surface as ABS.
- (DAT clitics crossreferencing participant internal arguments and raised possessors follow a different pattern—not explained until §5.)

The patterns listed above moreover interact: an ERG clitic cannot surface unless an ABS clitic is also present in the clitic cluster, while a 3rd person DAT clitic cannot surface without both ERG and ABS clitics present. This is strikingly reminiscent of dependent case patterns found crosslinguistically. I ultimately argue that these dependencies are determined configurationally, based on a clitic's relative hierarchical position in the left periphery—just as dependent case is canonically determined configurationally according to the relative positions of nominals at the clause level.

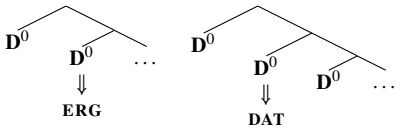
[19] The data are complicated, and a full account lies far beyond the scope of this paper. See, however, Foley (1991, pp. 413-424 and 430-433) for discussion.

[20] As mentioned in §2.1, Foley (1991) glosses the clitic morphology by grammatical function or thematic role, rather than morphological case. As a result, he does not discuss the morphosyntactic distributions of the individual paradigms.

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

Table 3 Realizational environments for clitic forms

Clitic form	Morphosyntactic context
ERG	Lower of two clitics
DAT	Intermediate of three clitics
ABS	Elsewhere/default



An important difference between dependent case assignment to Yimas clitics and dependent case assignment to nominals the *directionality* of case assignment. Because clitic doubling reverses the expected hierarchical order of elements due to its nesting nature, the ERG clitic paradigm surfaces closest to the verb, while the ABS clitic paradigm surfaces furthest from the verb. Despite this contrast, I how that the logic of the case assignment system is otherwise exactly the same, and briefly discuss the ramifications of this difference in §4.1.

Thus, we may reframe the Yimas case patterns in the following way: ERG is assigned to the lower of two clitics in the clitic cluster, while (3rd person) DAT is assigned to the intermediate of three clitics—inversely mirroring the positions of dependent ERG and DAT on nominals crosslinguistically. This parallel also extends to ABS, which I argue is default appearance of a clitic that is not assigned ERG or DAT case, akin to an "elsewhere." This is summarized in Table 3.[22]

3.1 Alternations on subject clitics

Our discussion starts with how subject clitics are realized. As repeated in (30), subjects of transitive verbs may be crossreferenced with ERG morphology, and subjects of intransitive verbs with ABS.

(30) **An ERG-ABS patterning**

a. *pu-* *n-* tay
3PL.ABS- 3SG.ERG- see
'He saw them.' (F195)

b. *pu-* wa- t
3PL.ABS- go- PERF
'They went.' (F195)

However, I now show that the subject of any verb, regardless of its argument structure, may be crossreferenced by either ABS or ERG—depending on the presence or absence of another clitic crossreferencing a lower DP. This reveals that the choice of paradigm for the subject clitic has no direct connection to factors such as transitivity or agentivity that are often proposed for ERG case crosslinguistically (e.g. Woolford, 1997, 2006; Aldridge, 2008; Legate, 2008).

As shown below, Yimas allows intransitive subjects to be crossreferenced by ERG morphology in certain contexts. I illustrate this with applicative constructions, in which an otherwise oblique nominal is 'promoted' to core status, allowing it to become available for clitic doubling (recall that oblique nominals cannot be doubled). Of interest to us is what happens when an intransitive verb is applicativized (as reflected by the presence of allative and comitative applicative morphology on the verb). In (31), we see that the subject of an intransitive verb normally surfaces with ABS morphology; however, this morphology is ERG when a lower applicative DP is also clitic doubled. In (32), the same pattern surfaces with an unaccusative subject.[23]

[22]The characterization of morphological case offered here is reminiscent of the treatment of case in Wunderlich (2001) (as well as van Valin 1991), in which morphological case encodes high, mid, and low roles, respectively. Dependent case theory, I suggest, is in many ways a generative reinterpretation of this idea, with these roles translated into relative structural height.

[23]In the absence of Yimas-specific unaccusativity diagnostics, the assumption that the verbs in (32)-(33) are unaccusative are based on their English translations. It is also worth noting that an agentive reading is especially difficult to obtain in the examples in (33).

(31) **Applicative of unergative; subject clitic is ERG**

a. ***na-*** na- iray- n
3SG.ABS- DEF- cry- PRES
'He is crying.' (F426)

b. *na-* ***n-*** taŋkway- iray- ɲcut
3SG.ABS- 3SG.ERG- ALL- cry- RM.PST
'He cried over her.' (F315)

(32) **Applicative of unaccusative; subject clitic is ERG**

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

b. *impa-* ***n-*** taŋ- kwalca- t
3DL.ABS- 3SG.ERG- COM- rise- PERF
'He got up with them both.' (F303)

A similar effect is seen below. Recall that modal prefixes trigger various effects on the adjacent clitic, to be discussed in §6. Crucially, one such effect (arising in certain combinations of modal prefixes and clitics) is that an otherwise ABS clitic is realized as ERG. In (33a), an indirect imperative construction, the subject *nmpi* 'letters' is clearly understood as a theme, yet is encoded with an ERG clitic. The example in (33b) displays the same pattern; the presence of a (class 9) relativizing clitic *m-* triggers ERG case on the clitic doubling the unaccusative subject *yan* 'tree.'

(33) **Modal prefixes trigger ERG on unaccuative subjects**

a. ***nmpi*** *ka-* ***mpu-*** tra- ya- n
leaf.VII.PL LIKE- 3PL.ERG- about- come- IMP
'Let the letters get distributed.' (F268)

b. [$_{RC}$ ***yan*** *m-* ***n-*** a- irm- t- *a-* n]
tree.V.SG REL.ABS- 3SG.ERG- DEF- stand- PRES- IX.SG- OBL
'(You put the goods there) where the tree stands.' (F418)

These examples highlight the fact that ERG in Yimas is independent of external argument status (Baker, 2014; Deal, to appear). However, while these data present evidence against inherent analyses of ERG case, they do not directly show that ERG case in Yimas is *dependent on the presence of a higher clitic*. But this is the only possible conclusion given the optionality of clitic doubling in Yimas. Partial doubling patterns are crucial because they allow us to manipulate the number of clitics present without changing the argument structure at the sentence level. Moreover, while the applicative data above showed that intransitive subject clitics may be ERG, partial clitic doubling data demonstrate the converse—that subjects of transitive verbs may surface as ABS.

In the minimal pair in (34), repeated from §2.4, the presence vs. absence of the ABS clitic crossreferencing the embedded complement determines whether the clitic crossreferencing the subject is ABS or ERG. In (34a), the subject clitic is ERG, as expected. However, in the absence of the ABS clitic *pia-*, the subject clitic is no longer ERG—it surfaces instead as ABS. Thus, the choice of which paradigm to use seems to depend on the presence of a second doubled clitic, *not* the presence of a second nominal argument (which is present in both examples below).

(34) **Partial doubling bleeds ERG case on subjects**

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

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

Note that these data by themselves are compatible with an alternative hypothesis, that ERG forms become unavailable as soon as another clitic is removed. However, this is not tenable: in the partial doubling construction in (35), ERG is retained on the subject clitic even though the direct object is not crossreferenced. This is because there is still a second clitic present (crossreferencing the indirect object).

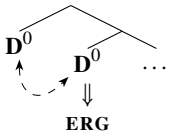
(35) **Partial doubling allows ERG if two clitics present**

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

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

In sum, the realization of a subject clitic as ERG in Yimas is not based on transitivity or agentivity. Rather, it is *configurational*, contingent on the presence of another, higher ABS clitic in the clitic cluster, (36):

(36) **ERG case assignment to clitic**



This is the exact logic of the dependent case theory of ergative case (modulo the directionality of case assignment; see §4). Crucially, however, in Yimas dependent case is calculated over the clitic cluster, rather than nominals in the clause. Below, I show that this logic also accounts for the distribution of 3rd person DAT clitics.

3.2 Alternations on IO clitics

3rd person DAT clitics (simply 'DAT' in this section) are also sensitive to clitic context. As mentioned earlier, the DAT clitics encoding participants and raised possessors do not behave in this way and will be discussed in §5. Concentrating only on the indirect object 3rd person DAT clitics for now, these morphemes may crossreference various kinds of indirect objects, such as goals, causees, and applied arguments:

(37) **DAT clitics crossreference indirect objects**

a. *k-* *ka-* tkam- r- ***akn***
VI.SG.ABS- 1SG.ERG- show- PERF- 3SG.DAT
'I showed him it (the coconut).' *(IO)* (F211)

b. tpuk *ka-* *ka-* na- tmi- am- nt- ***akn***
sago.pancake.X.SG X.SG.ABS- 1SG.ERG- DEF- CAUS- eat- PRES- 3SG.DAT
'I made him eat a sago pancake.' *(causee)* (F292)

c. *k-* *n-* taŋ- pampat- ntuk- ***nakn***
VI.SG.ABS- 3SG.ERG- APPL- cook- RM.PST- 3SG.DAT
'She cooked it (the heart) for him.' *(applied argument)* (F307)

However, just as with the ERG paradigm, the realization of DAT morphology on a particular clitic is dependent on the presence of other clitics; these clitics surface as ABS when the appropriate clitic context fails to be met.

Once again, I illustrate this with applicatives and optional clitic doubling. Recall the clitic patterns in applicative constructions from §3.1. Clitics doubling intransitive subjects are typically ABS but are realized as ERG in applicative contexts, while the clitics doubling applied arguments in these constructions are ABS, (38a-b). However, when the verb is transitive, the applied argument clitic is DAT, not ABS, (38c).

(38) **Applied argument clitics are ABS or DAT depending on transitivity**

a. ***impa-*** *n-* taŋ- kwalca- t
3DL.ABS- 3SG.ERG- APPL- rise- PERF
'He got up with them both.' *(appl. of unaccusative)* (F303)

b. ***na-*** *n-* taŋkway- iray- ɲcut
3SG.ABS- 3SG.ERG- ALL- cry- RM.PST
'He cried over her (looking at her body).' *(appl. of unergative)* (F315)

c. *k-* *n-* taŋ- pampat- ntuk- ***nakn***
VI.SG.ABS- 3SG.ERG- COM- cook- RM.PST- 3SG.DAT
'She cooked it (the heart) for him.' *(appl. of transitive)* (F307)

This follows from the generalization that the realization of DAT requires *two* other clitics—thus, three clitics in total. In (38c), this requirement is satisfied; in (38a-b), however, it is not, so the clitic crossreferencing the applicativized argument is ABS.

Turning now to optional clitic doubling, we find that, just like ERG, the availability of DAT vs. ABS is again truly controlled by *clitic context*, not transitivity or argument structure. As shown in (39), DAT is unavailable on indirect object clitics in partial doubling constructions. In both examples, a transitive verb is causativized, so both constructions contain the same three sentence-level arguments—subject, causee, and direct object—however, in (39b) the direct object is not clitic doubled. Crucially, this affects the form of the clitic crossreferencing the applicativized argument, which is DAT in the full doubling construction but ABS in the partial doubling construction.

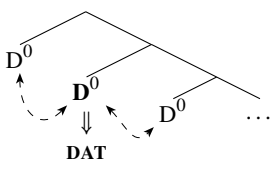
(39) **DAT unavailable with partial doubling**

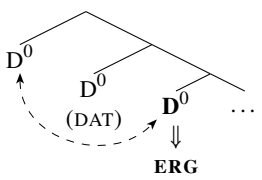
a. tpuk *ka-* *ka-* na- tmi- am- nt- ***akn***
sago.pancake.X.SG X.SG.ABS- 1SG.ERG- DEF- CAUS- eat- PRES- 3SG.DAT
'I made him eat a sago pancake.' (F292)

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

Thus, DAT is also context-sensitive, appearing on indirect object clitics when they cooccur with two other clitics. Moreover, the DAT clitic is structurally *intermediate* within the clitic cluster, both c-commanding a lower clitic and c-commanded by a higher clitic. This is illustrated in (40a). Finally, note that the system set up so far also presupposes an ordering between ERG and DAT case assignment on the clitics. Because the presence of DAT seems to be contingent on both ERG and ABS also being present, DAT must be assigned before ERG, i.e. be assigned in the presence of two caseless clitics, as shown in (40). Finally, as discussed in §2.4, after case is assigned, the DAT clitic is linearized as postverbal (Harbour, 2008).

(40) **DAT and ERG case assignment on clitics**

a.


b.


3.3 ABS as an elsewhere

Given the similarities between ERG and DAT case on Yimas clitics and dependent case on nominals crosslinguistically, I further propose that the ABS clitic paradigm also has a parallel. In dependent case theory, nominals that fail to be assigned morphological case surface instead with *unmarked case*, understood as NOM or ABS (Yip et al., 1987; Marantz, 1991). In Yimas, clitics are realized as ABS if they are not assigned ERG or DAT—ABS is, in essence, an *elsewhere*. This is consistent with the fact that the ABS paradigm is always realized on the structurally highest doubled clitic present, i.e. the linearly leftmost clitic in the verb complex—ERG and DAT both require a syntactically higher clitic as case competitor.

The idea that ABS is a morphological elsewhere recalls the (ultimately spurious) 'ABS Requirement' from §2.2. However, not only does this account for its relatively wide surface distribution, it crucially also permits the *absence* of ABS clitics.

This elsewhere account is reminiscent of Legate (2008), who argues that "ABS case" may arise in certain languages when nominals are assigned NOM and ACC case, but these cases happen to lack dedicated morphological exponents. As a result, nominals that receive *different abstract case features* may nonetheless surface with *the same morphological case*, (mis)labelled as "ABS." Consider, for instance, a partial case inventory for a language such as Warlpiri, under this system:

(41) **Warlpiri "ABS" as an elsewhere**

a. [ergative] ↔ -rlu/-ngku
b. [dative] ↔ -ku
c. [allative] ↔ -kurra
d. (. . .)
e. (elsewhere) ↔ -∅ (= "absolutive") (adapted from Legate 2008, p. 59)

This account predicts that ABS elements may display different syntactic behaviour; Legate shows that this is borne out in the languages she discusses. In Yimas, that the ABS paradigm is an elsewhere is already apparent, as it can encode a diverse range of DPs. In (42a-b), the sole ABS clitic encodes an intransitive subject and transitive subject, respectively.[24] In (42c), we find ABS encoding a direct object. Finally, in (42d), a partial doubling construction, ABS crossreferences an indirect object (causee).

(42) **ABS has an elsewhere distribution**

a. ***ama***- wa -t
1SG.ABS- go -PERF
'I went.' (F196)

b. nawn ***ma***- tpul?
who 2SG.ABS- hit
'Who did you hit?' (F235)

c. ***pu***- *n*- tay
3PL.ABS- 3SG.ERG- see
'He saw them.' (F195)

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

However, the elsewhere nature of the ABS paradigm extends beyond the clitic system. Recall from §2.4 that the ABS clitic paradigm is (nearly) identical to the independent pronouns of the language, shown earlier in Table 2.

[24] In (42a), this is because the verb is intransitive; in (42b), this is because non-subject wh-words cannot be crossreferenced by the relativizing morpheme *m*- (Foley, 1991, p. 431).

In (43)-(44), we further see that the (non-oblique) nominals and pronouns of Yimas are *always morphologically unmarked (*ABS*)*, regardless of their grammatical function or thematic role—and regardless of the morphological appearance of the clitics doubling them.

(43) **Sentence-level nominals are invariant**

a. *payum* **narmaŋ** **na-** *mpu-* tay
man.PL woman.SG 3SG.ABS- 3PL.ERG- see
'The men saw the woman.' (F193)

b. *payum* **narmaŋ** *pu-* **n-** tay
man.PL woman.SG 3PL.ABS- 3SG.ERG- see
'The woman saw the men.' (F193)

(44) **Sentence-level pronouns are invariant**

a. ***kapwa*** taŋka-mpi ***kapwa-*** wa- t
2DL.PRON where-ADV 2DL.ABS- go- PERF
'Where have you gone?' *(intransitive subject)* (F458)

b. ***kapwa*** *na-* ***ŋkran-*** a- aykapiŋa- n
2DL.PRON 3SG.ABS- 2DL.ERG- DEF- know- PRES
'Do you two know him?' *(transitive subject)* (F462)

c. ***kapwa*** ***ŋkut-*** ŋa- ira- kwalca- kia- k
2DL.PRON 2DL.DAT- DEF- APPL- rise- FUT- IRR
'I will come up on you.' *(applied object)* (F460)

What this reveals, I argue, is that the elsewhere characterization of "ABS case" in Yimas must be defined slightly differently on nominals vs. on clitics. On nominals, "ABS case" can be plausibly analyzed as the zero exponent of a morphologically underspecified case feature, in the sense of Legate (2008). However, in the clitic domain, the "ABS" paradigm is simply the *output of clitic doubling without further morphological manipulation* (i.e. without dependent ERG or DAT case assignment).

More broadly, what this entails is that the notion of an ABS 'clitic paradigm' in Yimas requires clarification—while it is a useful label for non-ERG, non-DAT clitics, it is in essence the pronominal paradigm.

3.4 Section summary

I have demonstrated that the Yimas clitic system exhibits context-sensitive morphological alternations that parallels the distribution of dependent case on nominals across languages, only they are calculated within the clitic cluster. ERG case is assigned to a clitic c-commanded by a caseless clitic, while DAT is assigned to the intermediate of three clitics. Evidence that these alternations are clitic-internal comes from the optionality of clitic doubling, which permits a mismatch between the number of clitics and the number of DPs at the sentence-level. Finally, the ABS clitic paradigm does not reflect an assigned case on par with ERG and DAT, but rather the default state of a clitic in the *absence* of dependent case assignment.

4 Dependent case crosslinguistically

I now show that the context-sensitive nature of ERG and DAT clitics in Yimas mirrors the distributions of dependent case on nominals crosslinguistically. As defined in §1, dependent case theory proposes that the realization of morphological case is determined configurationally, based on a nominal's structural (c-command) relationship with another nominal.[25] The strength of the parallels between the Yimas clitics and nominals crosslinguistically

[25]This paper will not adjudicate between syntactic vs. postsyntactic approaches to dependent case, though see Baker and Vinokurova (2010), Baker (2015) and Preminger (2011, 2014) for the former, and Yip et al. (1987), Marantz (1991), and McFadden (2004) for the latter.

reveals that the phenomenon that we know as 'dependent case' is much broader than previously thought. Just as Yimas displays morphological alternations on its clitics, languages that exhibit dependent case patterns may be thought of as displaying sentence-level morphological alternations.

This section also briefly discusses a point concerning the directionality of ERG case assignment; recall that our morpheme in Yimas reveals that ERG case must be assigned to a *structurally lower* clitic. While this appears at odds with standard treatments of dependent ERG case assignment to nominals (which assume the opposite directionality), I suggest that the pattern seen in Yimas is actually predicted by the existence of *syntactically ergative* languages—i.e. languages in which the ABS object raises to a position higher than the subject).

4.1 Ergative

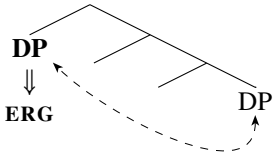
In dependent case theory, whether a language exhibits a nominative-accusative (NOM-ACC) or ergative-absolutive (ERG-ABS) case alignment depends on the directionality of case assignment. The dependent case rules for ERG and ACC case standardly assumed are stated and schematized below.[26] Although the structure for ACC case assignment is included here for completeness, I will focus primarily on ERG here.[27]

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

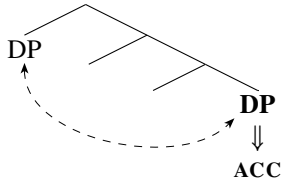
a. *Ergative* case is assigned to the higher of two case-receiving nominals (the c-commander)

b. *Accusative* case is assigned to the lower of the case-receiving nominals (the c-commandee)

(46) a. **Ergative:**



b. **Accusative:**



That ERG case assignment can be dependent is not always immediately obvious, as it is often empirically indistinguishable from other mechanisms of case assignment that make use of functional heads. Take, for example, the Shipibo (Panoan) data below, from Baker (2014). The transitive subject in (47a) is marked with the ERG morpheme *-nin*, while the object in (47a) and the intransitive subject in (47b) are both ABS.

(47) **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, p. 342)

These examples, by themselves, are in principle compatible with numerous analyses of ergativity. For instance, it is often argued that ERG case is inherent, assigned by transitive v^0 to the external argument, which sits in Spec-*v*P (Woolford, 1997, 2006; Aldridge, 2004, 2008; Legate, 2008, a.o.).[28]

[26] Note that this diverges somewhat from the original implementation by Marantz (1991), which relies partly on government (see also Bittner and Hale (1996b)). However, characterization below is consistent with more recent approaches to dependent case, e.g. Baker (2015).

[27] For copious evidence for ACC as a dependent case, see Baker and Vinokurova (2010), Baker (2015).

[28] Another compatible view takes ERG to be abstract Case, assigned by a higher head such as T^0 (Laka, 2000; Rezac et al., 2014). However, these analyses generally require additional mechanisms to explain how intransitive subjects, presumably also in Spec-TP, receive ABS case.

However, Baker (2014) provides additional data that resist analysis under inherent theories of ERG case: *all* Shipibo subjects are able to take ERG or ABS case when syntactic conditions warrant.[29] This follows straightforwardly from a dependent case approach to ERG case assignment—and also looks remarkably similar to the behaviour of subject clitics in Yimas. As (48) shows, all subjects may bear ERG case morphology when the verb is applicativized, regardless of the transitivity of the verb.

(48) **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.' *(transitive verb)*

b. Papashoko-**n**-ra Rosa bewa-xon-ai
grandfather-ERG-PRT Rosa sing-APPL-IMPF
'The grandfather is singing for Rosa.' *(unergative verb)*

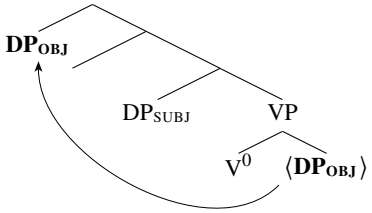
c. bimi-**n**-ra Rosa joshin-xon-ke
fruit-ERG-PRT Rosa ripen-APPL-PRF
'The fruit ripened for Rosa.' *(unacc. verb)* (Baker, 2014, pp. 365–369)

Importantly, (48c) shows that even unaccusative subjects may surface as ERG in certain environments—just like in Yimas. 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 Shipibo able to mark subjects in a variety of two-argument constructions, regardless of the argument structural properties of the verb or the thematic role of the subject. Thus, as noted above, the core difference between Shipibo and Yimas is the *domain* in which these case alternations hold—the case patterns displayed by both languages are otherwise symmetrical.

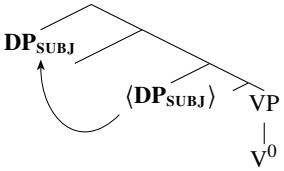
Finally, I turn to why ERG case assignment in Yimas proceeds *downwards*, while ERG case assignment within the dependent case framework is normally considered to take place *upwards*. I suggest that this distinction ultimately concerns the distinction between *morphologically ergative* vs. *syntactically ergative* languages. In the latter type of language, it is typically assumed that the (ABS) object raises to a locus where it c-commands the transitive (ERG) subject, (49) (e.g. Dixon, 1979; Murasugi, 1992; Bittner and Hale, 1996a,b; Manning, 1996; Ershova, 2019):

(49) **Configuration for syntactic ergativity**

a. *Transitive:*



b. *Intransitive:*



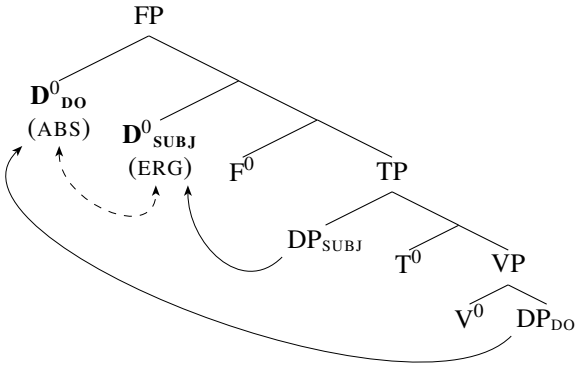
Therefore, if it can be shown that (i) a language L is syntactically ergative, (ii) ERG case in L is dependent, and (iii) case assignment *follows* object raising, then ERG case assignment proceeds downwards in L. Recently, Yuan (2018) and Ershova (2019) have argued that these conditions are in fact met in syntactically ergative languages Inuit and West Circassian, respectively (see also Bittner and Hale 1996a for a precursor of this idea). Crucially for our purposes, the configuration in (49a) is highly reminiscent of the structure of Yimas clitic doubling offered in §2.4. This structure is presented again as (50) (note that the solid arrows indicate clitic doubling, while the dotted line indicates case competition among the doubled clitics). In Yimas, clitic doubling of the transitive object raises it above the clitic encoding the transitive subject, on par with what we see in syntactically ergative languages.

[29] See also Deal (to appear) on Nez Perce.

(50) **Downwards ERG dependent case assignment in Yimas**

a. *pu-* *n-* tay
3PL.ABS- 3SG.ERG- see
'He saw them.' (F195)

b.

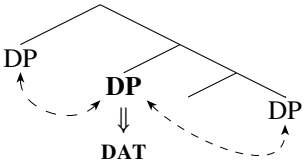


Thus, Yimas is syntactically ergative (cf. Phillips, 1993, 1995). However, its morphologically ergative patterning is, as discussed above, instantiated on its clitic cluster rather than its nominals. While I leave a deeper investigation of this parallel for future research, the present discussion suffices to demonstrate that dependent ERG case in Yimas mirrors that found across languages. Below, I extend this idea to DAT case.

4.2 Dative

Although it is often proposed that DAT is inherent, lexical, or structural (Marantz, 1984; Woolford, 1997, 2006), there is crosslinguistic evidence that DAT may also be dependent (e.g. Harley, 1995; Folli and Harley, 2007; Podobryaev, 2013). The working definition of dependent DAT case I adopt is in (51), from Podobryaev (2013):

(51) **Dependent DAT 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.



This definition, which takes DAT to be *intermediate* dependent case, departs from previous accounts that take dependent DAT case to be assigned to the higher of two VP-internal nominals (e.g. Baker and Vinokurova, 2010). The intermediate dependent case treatment extends the parallel with Yimas DAT indirect object clitics, which is computed internal to the entire domain of clitics and does not directly reference the exact structural position (i.e. VP-internal or VP-external) of the clitic-doubled DP.

I propose that treating DAT case as dependent accounts for case alternations in ditransitive (tri-argumental) constructions of various types and across a variety of languages; I will mostly discuss causative constructions here. As correctly predicted by this approach, we find differences between NOM-ACC and ERG-ABS languages in how exactly these DAT alternations surface. To start, observe the following data from Alutor, from Podobryaev (2013). These constructions show that DAT case on an indirect object (a causee) may in certain circumstances disappear, as in (52).

(52) **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.' (Koptjevskaja-Tamm and Muravyova 1993, p. 308)

DAT case that surfaces on the causee in (52a) is unavailable when the direct object undergoes noun incorporation into the verb, (52b). This pattern is *not expected* under functional-head and lexical/inherent analyses of DAT case assignment, as the head responsible for assigning a causee θ-role or DAT case to the argument in question should be available regardless of whether the direct object, a separate argument, is incorporated into the verb. It follows straightforwardly, however, from a dependent treatment of DAT case, if incorporated nominals cannot participate in the case calculation (presumably because they are structurally smaller than case-receiving DPs/KPs).

The Alutor paradigm in (52) instantiates a common pattern of case-marking causees in causative constructions. crosslinguistically, causees often exhibit case alternations between DAT and some other morphological case, depending on the transitivity of the causativized verb. Thus, while Alutor triggers such a case alternation via noun incorporation, we see the same effect simply by comparing intransitive and transitive verbs. An example of this comes from Japanese, (Kuroda, 1965; Terada, 1990; Harley, 1995, a.o.), (53). Here, the causee is marked DAT when the verb is transitive, but is accusative when the verb is intransitive.[30]

(53) **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, p. 157)

Though not explored by Harley (1995) and Podobryaev (2013), DAT as dependent case correctly predicts a typological contrast between languages with a NOM-ACC case alignment and those with an ERG-ABS case alignment. Whereas Japanese exhibits a DAT~ACC case alternation on its causees, ergative languages are instead exhibit alternations between DAT and ABS case. This is because ERG case is assigned upward while ACC case is assigned downward. As the lower of two arguments of a causativized intransitive verb, the causee receives dependent ACC case in an accusative language but surfaces as ABS in an ergative language. This is borne out in ergative language Basque, (54), as well as in the Shipibo examples in (48) above.

(54) **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, pp. 224, 230)

This account of dependent DAT case parallels the behaviour of intermediate DAT clitics in Yimas. Because Yimas is ergative, DAT alternates with ABS.

In summary, I showed that, although DAT case is often inherent or structurally assigned, this is not always 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. Moreover, a new argument for this dependent treatment of DAT case comes from the fact that DAT clitics in Yimas, which are clearly not controlled by argument structure, behave in a parallel fashion.

[30] Similar data can also be seen in French (Kayne, 1975; Guasti, 1993) and Italian (Folli and Harley, 2007).

4.3 ABS as an elsewhere case

Within dependent case theory, ABS (or NOM) case is the *unmarked case*, surfacing on nominals that fail to receive lexical or dependent case (Marantz, 1991). As I showed in §3, what we understand as "ABS" in Yimas also behaves like a morphological elsewhere (cf. Legate, 2008). Moreover, under this approach, the ABS clitic paradigm can be analyzed as the default appearance of a doubled clitic, surfacing in the absence of dependent case assignment (Kornfilt and Preminger, 2015).

The idea that ABS "case" is simply label for the absence of case assignment altogether contrasts with a subtly different analysis, which takes ABS to be *assigned* to any nominal that does not receive dependent or lexical case (cf. Marantz, 1991). Kornfilt and Preminger (2015), however, provide various arguments in support of the caselessness approach advocated for here.[31] Support for the former characterization of ABS comes from the Turkic language Sakha, in which dependent ACC case is fed by object shift (Baker and Vinokurova, 2010). In (55), we see that Sakha further permits embedded subjects to undergo movement into the matrix clause, and that this too can trigger ACC case on the embedded subject.

(55) **Sakha: Raising feeds dependent ACC case assignment**

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. min ehigi-**ni** [bügün kyaj-yax-**xyt** dien] erem-mit-im
I you-ACC today win-FUT-2PL that hope-PST-1SG
'I hoped you would win today.' (Vinokurova, 2005, pp. 361, 366)

Crucially, raised ACC subjects are able to control subject agreement on the embedded verb, suggesting that the ϕ-probe in the embedded clause is valued prior to A-movement of the subject. Since the raised nominal originates in the embedded clause, it is unsurprising that it agrees with the embedded verb. However, what is surprising is the fact that we see agreement with an ACC-*marked nominal* in these contexts—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.[32] The solution, they suggest, is that NOM is the *absence of case* entirely, and that caseless nominals control agreement in Sakha. 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 for morphologically unmarked nominals, 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), which requires that *all* nominals receive case according to a case-assigning hierarchy. In contrast, the current approach allows some nominals to remain caseless, if lexical and dependent rules do not apply to them.

4.4 Summary

In this section, I have demonstrated that the alternations on Yimas clitics are comparable to case alternations seen on nominals crosslinguistically. This is, I argue, dependent case. Just as ERG and DAT in Yimas are sensitive

[31] Of course, this does not account for the NOM and ABS case morphemes that have non-zero exponents crosslinguistically. I leave integrating these cases into the current proposal for future research.

[32] For 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, conceptually problematic, since this means that dependent case can be assigned to nominals that already receive case; this is contrary to the standard view that only *caseless* nominals are in competition to receive dependent case and leave the case competition upon receiving case.

to the number of clitics present, ERG and DAT case on nominals have parallel distributions at the sentence-level crosslinguistically. Similarly, just as ABS case in Yimas seems to be the default realization of a clitic in the absence of dependent case, unmarked case on nominals can also be analyzed as caselessness.

5 Context-invariant DAT case

So far, we have seen that the distributions of ERG, (3rd person) DAT, and ABS in Yimas are determined based on the number of clitics present. I now broaden the discussion to participant DAT clitics, as well as DAT encoding raised possessors. Crucially, these instances of DAT *do not* behave like dependent case, necessitating an alternative analysis. Again, I show that these DAT clitics have useful crosslinguistic parallels.

The broader theory of case assignment subsuming dependent case actually identifies at least three types of case, which may be hierarchically ordered:

(56) **The case realization disjunctive hierarchy (adapted from Marantz 1991)**

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 these cases, in the order given. Once a nominal is case-assigned, it leaves the competition and is excluded from the rest of the competition.[33] Unlike dependent and unmarked case, lexical case on nominals is taken by Marantz (1991) to be assigned prior to dependent case. Nominals that receive lexical case are unable to participate in the rest of the case calculation and, as a result, may *bleed* subsequent dependent case assignment. In Icelandic, for example, the presence of a quirky (DAT) subject bleeds the expected ACC case assignment on the object—which surfaces instead without overt case morphology, (57).

(57) **Icelandic: quirky DAT bleeds dependent ACC**

a. **dagmamman** bakaði **brauðið**
day.mommy.NOM baked bread.ACC
'The day-mommy baked the bread.'

b. **barninu** batnaði **veikin**
child.DAT recovered.from disease.NOM
'The child recovered from the disease.' (Yip et al., 1987, pp. 222–223)

This kind of bleeding interaction between lexical and dependent case is similar to what we see in Yimas, in constructions containing participant and possessive DAT clitics; recall that these instances of DAT—henceforth, "context-invariant DAT"' also block dependent ERG case assignment. This is consistent with the overall analysis of this paper, as it would suggest that Yimas exhibits *all three* case types in (56).

At the same time, however, there are some important differences between lexical case on nominals and context-invariant DAT in Yimas; for instance, these clitics are not idiosyncratically case-assigned in the context of particular verbs, nor are they oblique (recall that only core arguments may be clitic-doubled in the first place). Rather, what we see in Yimas is that *certain classes* of nominals are consistently and obligatorily crossreferenced by the DAT clitic paradigm—a pattern more reminiscent of Differential Object Marking (e.g. Dixon, 1994; Aissen, 2003).

I propose that the profile of context-invariant DAT shares properties in common with *both* lexical case and DOM. DOM in Yimas involves movement (clitic doubling) of participants and raised possessors to a dedicated position, licensing them (Zubizarreta and Pancheva, 2017; Kalin, 2018). Clitics that move to this position are spelled out as DAT. Because the determination of DAT case morphology precedes the dependent case assignment process, this yields the bleeding effect on ERG case.

[33] As discussed above, however, I depart from the hierarchy in (56) somewhat in that I take 'unmarked case' to be the absence of case assignment altogether.

5.1 Properties of context-invariant DAT

Unlike the dependent DAT clitics encoding intermediate arguments, the clitics that realize participant internal arguments and raised possessors *obligatorily* bear DAT case, i.e. are insensitive to the surrounding clitic context. I will refer to the former as DAT_{DEP} and the latter as DAT_{PART} and DAT_{POSS} for clarity.

First, the examples below, repeated from §2.3, show that DAT_{PART} may surface when only two clitics are present, (58a); this persists even when there is only one clitic, for instance in the partial doubling construction in (58b). Using ABS morphology to crossreference a participant internal argument and omitting the DAT morpheme altogether are both impossible, (58c-d), revealing that DAT_{PART} is *obligatory*.

(58) **DAT_{PART} in Yimas is preserved with partial doubling**

a. *na-* ***kra-*** tay
3SG.ABS- 1PL.DAT- see
'He saw us.' (F205)

b. Mitchell ***kra-*** tay
Mitchell 1PL.DAT- see
'Mitchell saw us.' (F,p.c.)

c. #Mitchell *ipa-* tay
Mitchell 1PL.ABS- see
Intended: 'Mitchell saw us.' (F,p.c.)

d. *ipa *na-* tay
1PL.PRON 3SG.ABS- see
Intended: 'He saw us.' (F,p.c.)

The obligatoriness of DAT means that it may bleed dependent ERG case assignment. The ensuing ABS-DAT pattern is repeated below.

(59) **DAT blocks dependent ERG**

a. *pu-* ***n-*** tay
3PL.ABS- 3SG.ERG- see
'He saw them.' (F195)

b. ***na-*** *kra-* tay
3SG.ABS- 1PL.DAT- see
'He saw us.' (F205)

Turning now to DAT_{POSS}, raised possessors of *all persons* pattern the same way.[34] The possessed DP may serve as an object, (60a-b), or as an intransitive subject, (60c-d); in either case, the possessor clitic is DAT while the possessee clitic is ABS.

(60) **DAT raised possessors**

a. yampaŋ *k-* *mpu-* ***ŋa-*** kra- t
head.VI.SG VI.SG.ABS- 3PL.ERG- 1SG.DAT- cut- PERF
'They cut my hair.' (F301)

b. naŋkun *na-* *ka-* tu- r- ***akn***
mosquito.V.SG V.SG.ABS- 1SG.ERG- kill- PERF- 3SG.DAT
'I killed the mosquito on her.' (F301)

c. narm *p-* ***kra-*** nanaŋ- kacakapi- ɲcut
skin.VII.SG VII.SG.ABS- 1PL.DAT- DUR- hide- RM.PST
'Our skin is deteriorating.' (F301)

d. wampuŋ mama-k-n *na-* ti- k- ***nakn***
heart.V.SG bad-IRR-V.SG V.SG.ABS- feel- IRR- 3SG.DAT
'His heart felt bad.' (i.e. he was angry) (F301)

The example in (60d) is especially illuminating, as it shows that 3rd person DAT_{POSS} clitics differ fundamentally

[34] Possessor raising is used for possessors of inalienably possessed things, such as body parts, entities on body parts (e.g. mosquitos), and personal characteristics (Foley, 1991, pp. 300-303). Raised possessors are crossreferenced by DAT clitic morphology and, if overt, surface as caseless nominals. Non-raised possessors are not clitic doubled and surface as independent oblique-marked nominals.

from the 3rd person DAT_{DEP} clitics used to crossreference indirect objects, despite their homophony.[35] Whereas the latter surfaces as an intermediate dependent case when three clitics are present, the example in (60d), as well as the data below, show that 3rd person DAT_{POSS} is *insensitive* to the number of clitics.

(61) **DAT_{POSS} is context-insensitive**

a. narm *p-* *mpu-* tpul- kamprak- r- ***akn***
skin.VII.SG VII.SG.ABS- 3PL.ERG- hit- break- PERF- 3SG.DAT
'They hit and broke his skin.' (F283)

b. narm *pu-* tpul- kamprak- r- ***akn***
skin.VII.SG 3PL.ABS- hit- break- PERF- 3SG.DAT
'They hit and broke his skin.' (F324)

c. narm tpul- kamprak- r- ***akn***
skin.VII.SG hit- break- PERF- 3SG.DAT
'They hit and broke his skin.' (F,p.c.)

Finally, (62) demonstrates that raised possessors *must* be clitic-doubled.

(62) **DAT_{POSS} is obligatory**

a. yampaŋ *k-* *mpu-* ***ŋa-*** kra- t
head.VI.SG VI.SG.ABS- 3PL.ERG- 1SG.DAT- cut- PERF
'They cut my hair.' (F301)

b. *yampaŋ ama *k-* *mpu-* kra- t
head.VI.SG 1SG.PRON VI.SG.ABS- 3PL.ERG- cut- PERF
Intended: 'They cut my hair.' (F,p.c.)

The properties of context-invariant DAT are summarized as follows.

- Context-invariant DAT is used to crossreference participant internal arguments and raised possessors of all persons
- Clitic-doubling of these DPs is obligatory, and these clitics are obligatorily DAT

5.2 Differential Object Marking

The fact that certain classes of DPs in Yimas are obligatorily crossreferenced by a particular type of morphology is highly reminiscent of Differential Object Marking crosslinguistically (e.g. Dixon, 1994; Aissen, 2003). Following Kalin (2014, 2018), I assume that DOM serves a *nominal licensing* function. Although DOM is often discussed in the context of case morphology on nominals, Kalin points out that it may also surface as ϕ-agreement or clitic doubling; thus, while nominal licensing is uniformly mediated by a dedicated licensing head, L^0, languages may differ in the exact overt reflex that this takes. Considering that Yimas has a rather limited nominal case inventory, it is perhaps not surprising that the language instead makes use of its clitic system for this purpose. The relevant data are repeated below:

(63) **DOM as DAT cliticization in Yimas**

a. Mitchell ***kra-*** tay
Mitchell 1PL.DAT- see
'Mitchell saw us.' (F,p.c.)

[35] This dual function of DAT is well-attested crosslinguistically on nominals (Harley, 1995; Anagnostopoulou and Sevdali, 2015; Baker, 2015).

b. narm tpul- kamprak- r- ***akn***
skin.VII.SG hit- break- PERF- 3SG.DAT
'They hit and broke his skin.' (F,p.c.)

Based on the ABS-ERG-DAT$_{PART}$-verb order of prefixal clitics, the locus of context-invariant clitics in Yimas must be structurally immediately below the other clitics. I further assume that there is a *single position* for DOM, meaning that 3rd person DAT$_{POSS}$ must occupy a structurally lower position than 3rd person DAT$_{DEP}$—though this is obscured by the fact that they are uniformly linearized as postverbal.[36] The underlying clitic orders are schematized in (64).

(64) **Clitic orders in Yimas (revised)**[37]

a. Surface: (MOD-) (ABS-) (ERG-) (DAT$_{part}$-) VERB STEM- (DAT$_3$)

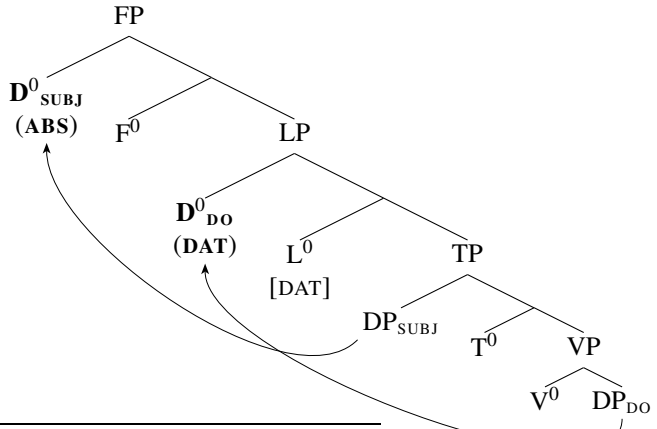
b. Underlying: (MOD-) (ABS-) **(DAT$_3$-)** (ERG-) **(DAT$_{part/3.poss}$-)** VERB STEM

A structure containing the DOM of a participant direct object is provided in (65). Note that clitic doubling is taken to be triggered by two distinct heads, abstractly labelled as F^0 and L(icensor)^0, respectively. I moreover assume that L^0 is responsible for assigning DAT case to the clitic, on par with lexical case crosslinguistically. Because clitics that move to the LP domain are DAT, they cannot serve as case competitors for the other clitics. As a result, dependent ERG case is unavailable in (65).

(65) **Clitic doubling with DOM**

a. ***na***- *kra*- tay
3SG.ABS- 1PL.DAT- see
'He saw us.' (F205)

b.



[36]The claim that there are two structural positions for 3rd person DAT clitics should be testable. Following §2.4, we expect the order of postverbal agreement morphemes to be verb-DAT$_{POSS}$-ERG-DAT$_{DEP}$-ABS, as in (i). Unfortunately, I am not aware of any data in Foley (1991) that shed light on this prediction.

(i) a. ta- *kay*- ckam- r- ***ŋkan***- ***mpan***- *ŋ*
NEG- 1PL.ERG- show- PERF- PC(ERG)- 3PL.DAT- VI.SG(ABS)
'We few didn't show them it (the coconut).' (F260)

b. narm ta- *kay*- tpul- kamprak- r- ***akn***- ***ŋkan***- *m*
skin.VII.SG NEG- 3PL.ERG- hit- break- PERF- 3SG.DAT- PC(ERG)- VII.SG(ABS)
'We few didn't hit and break his skin.' (constructed)

[37]A reviewer asks why DAT$_{DEP}$ crossreferencing indirect objects and DAT$_{PART}$ crossreferencing participant direct objects (or raised possessors) never cooccur, if they occupy different structural positions and have different functions. I assume that this is a matter of haplology, ruling out multiple instances of the same clitic paradigm in a single verb complex. This process crucially occurs *after* case assignment to the clitics, such that it is able to eliminate pairs of DAT clitics. Thus, while dependent case is argued in this paper be a means of dissimilating between clitics (§6), it is not the *only* dissimilation strategy operative.

Table 4 Correspondence between Yimas clitics and dependent case theory

Type of case	Clitic form
Lexical	DAT_{PART}
	DAT_{POSS}
Dependent	ERG
	DAT_{DEP}
Unmarked/Caseless	ABS

The idea that participant internal arguments and inalienable possessors obligatorily undergo cliticization (syntactic movement) to a higher position is also seen in other languages. As shown by Zubizarreta and Pancheva (2017), a language that displays this pattern is Paraguayan Guaraní. In (66a-b), we see that both participant direct objects and inalienable possessors must surface as preverbal clitics; however, (66c-d) demonstrate that their 3rd person counterparts remain postverbal as full pronouns.[38]

(66) **Cliticization of participant internal arguments in Paraguayan Guaraní**

a. (Ha'e) **che=**mbo-jahu
((s)he) 2SG.OBJ=TR-bathe
'(S)he bathes you.'

b. Ha'e **nde=**rova (jo)héi
(s)he 2SG.POSS=face wash
'(S)he washes your face.'

c. (Che) re-mbo-jahu **ichupe**
(I) 2SG-TR-bathe him
'You bathe him.'

d. Nde re-hova (jo)héi **ichupe**
you 2SG-3POSS.face wash her
'You wash her face.' (Zubizarreta and Pancheva, 2017, pp. 1170, 1172, 1181–1182)

While Yimas participant internal arguments behave on par with those in Paraguayan Guaraní, 3rd person raised possessors in Yimas also raise. I leave a fuller investigation of why this difference holds for future research.[39]

Zooming out, we have found yet another parallel between morphological case on nominals and the clitic paradigms in Yimas, despite some surface differences. Just as lexical case-marked nominals may bleed dependent case assignment, DAT case assignment to certain clitics in Yimas—analyzed here as a DOM pattern—similarly prevents such clitics as functioning as case competitors for dependent ERG case.

5.3 Section summary

This section has demonstrated that, in addition to having clitic analogues of dependent and unmarked case, Yimas also exhibits a variant of lexical case in its clitic system—DAT clitics crossreferencing participant internal arguments and raised possessors are context-insensitive, obligatory, and may block dependent ERG case on subject clitics, on par with lexical case on nominals crosslinguistically.

More generally, I showed that the morphological form of a given clitic in Yimas is determined by (i) its inherent properties (e.g. its person specification and thematic role, in the case of DOM) and (ii) its structural position relative to the other clitics present in the clitic cluster. A summary is provided in Table 4.

As mentioned, the distributions of these clitic forms in Yimas parallel the distribution of lexical, dependent, and unmarked case on nominals crosslinguistically. Thus, both systems exhibit context-sensitive morphological alternations, albeit in different structural domains (the clitic domain vs. the clausal domain in other languages). That

[38] More concretely, Zubizarreta and Pancheva argue that Paraguayan Guaraní displays a direct-inverse system. As a result, the preverbal agreement slot in Infl^0 always bears features of the highest ranked argument along a person hierarchy. What is crucial for our purposes is the fact that participant internal arguments must undergo movement to this position, while 3rd person internal arguments do not.

[39] As discussed by Kramer (2014), the obligatory clitic doubling of inalienable possessors (without a person sensitivity) is also found in Amharic. Kramer also outlines a number of other contexts in which object clitic doubling is required (see also Baker 2012). It would be worth determining whether similar effects obtain in Yimas.

this general pattern ranges across both systems strongly suggests that they are subtypes of a single phenomenon—the topic of §6 below.

6 Dependent case as dissimilation

In the remainder of this paper, I propose that both dependent case on nominals and the clitic case alternations in Yimas are *domain-specific instantiations of morphosyntactic dissimilation*. The pressure to dissimilate, in turn, comes from a general well-formedness condition, requiring that all elements in some local domain be featurally distinct from one another (e.g. Grimshaw, 1997; Wunderlich, 2001; Richards, 2010; Nevins, 2012).[40]

This proposal converges with Baker's (2015) idea that dependent case functions to differentiate nominals. Differentiation presupposes the existence of *multiple* objects that are otherwise similar; hence, dependent case assignment to a given element requires the presence of at least one other competing element in its local syntactic environment. Moreover, this proposal 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 unmarked (ABS, NOM): marking only one element within a non-distinct pair is sufficient to differentiate between the two.

Once again, Yimas provides novel empirical evidence for this idea. In §6.1, I show that the 'ABS as default' approach, originally introduced in §3.3, motivates a dissimilatory treatment of ERG and DAT case. In light of this idea, I then speculate in §6.2 that the morphological effects triggered by modal prefixes (discussed in §2.2-2.3) may also be understood as dissimilatory. Evidence will come from the novel observation that the exact patterns that arise in Yimas mirror dissimilatory effects that are attested crosslinguistically.

6.1 Dissimilating ABS clitics

The idea that dependent ERG and DAT case assignment rules serve to disambiguate between otherwise indistinguishable ABS clitics in Yimas builds on Wunderlich's (2001) UNIQUENESS constraint. As discussed in §2.3,[41] UNIQUENESS requires that each case paradigm in Yimas occurs only once per clitic cluster. Wunderlich additionally characterizes the existence of such a constraint as "serv[ing] to avoid ambiguity" (p. 17). However, I highlight here a crucial difference between the details of Wunderlich's proposal and my own. Wunderlich takes a representational approach to the overall appearance of the clitic cluster; UNIQUENESS constrains the space of possible paradigmatic combinations. In contrast, I argue that the case patterns on the clitics are *derived* by the application of morphological rules.

A derivational approach to the clitic-case patterns is necessary given the derivational relationship between the clitics and their DP associates. If all clitics are 'ABS' by default upon clitic doubling, then there must be morphological rules that convert these ABS clitics to ERG or DAT. Thus, I argue that these rules may be viewed as a *response* to the UNIQUENESS constraint. In contrast, the absence of ERG and DAT case signifies that this constraint is satisfied to begin with. Sequences of ABS clitics, the output of multiple clitic doubling, are banned because they are morphosyntactically indistinguishable from one another, and are thus realized with alternate paradigms in order to resolve this issue. This is schematized below:

(67) **Dependent case as dissimilation in Yimas**

a. **pu-* *na-* tay
3PL.ABS- 3SG.ABS- see
Intended: 'He saw them.'
(output of CD)

b. *pu-* ***n-*** tay
3PL.ABS- 3SG.ERG- see
'He saw them.'
(dissim. via ERG *case)*

[40] Dissimilation is more widely known as a phonological phenomenon. The Obligatory Contour Principle (OCP) was proposed as a restriction on consecutive identical phonological features (Leben, 1973; Goldsmith, 1976; McCarthy, 1986; Bennett, 2015). Constraints similar to the one here have since been proposed to account for dissimilatory phonological phenomena.

[41] See also the attached Appendix.

This captures why ERG and DAT case only surfaces in clitic clusters containing multiple clitics; UNIQUENESS is vacuously satisfied if there is only one clitic present. This approach may moreover be extended to dependent case systems crosslinguistically. If 'ABS' on nominals is simply the absence of case altogether (Kornfilt and Preminger, 2015), then, in a parallel vein to Yimas clitics, dependent case assignment may also be seen as a dissimilatory strategy.

In contrast to dependent ERG and DAT case, the core function of lexical case or DOM (e.g. DAT_{PART}/DAT_{POSS} in Yimas) is not to dissimilate, as its appearance is tied to particular featural specifications and thematic roles and may also be tied to nominal licensing. Nonetheless, because its presence in monotransitive constructions may satisfy UNIQUENESS, dependent case assignment in such constructions is unnecessary, (68a-b). However, dependent case assignment must still take place in ditransitive constructions to disambiguate the two non-DOM clitics, (68c).

(68) **DAT blocks dependent ERG in monotransitives but not ditransitives**

a. ***pu***- *nan*- tay
3PL.ABS- 2SG.DAT- see
'They saw you.' (F198)

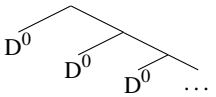
b. ****mpu***- *nan*- tay
3PL.ERG- 2SG.DAT- see
Intended: 'They saw you.' (F198)

c. *k*- ***mpu***- *ŋa*- tkam- t
VI.SG.ABS- 3PL.ERG- 1SG.DAT- show- PERF
'They showed me it (the coconut).' (F208)

Why is dissimilation required? One possible reason could be that, as noted in §2, grammatical relations are primarily encoded on the clitics, rather than the nominals (which are often dropped in discourse). Without the case paradigms, one cannot reliably map a particular clitic to a particular grammatical function.

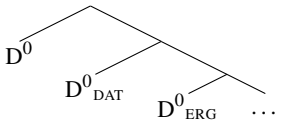
Another possibility stems from Richards (2010), who theorizes that dissimilation may be motivated by linearization considerations. Under this approach, linearization statements can only be made on elements that are *morphosyntactically distinct*; non-distinct elements cannot be interpreted by the linearization algorithm because they would create a contradictory linearization statement.[42] The Yimas clitic system may then also be viewed as unlinearizable without morphological case. As schematized throughout (69), since the clitic cluster consists of a series of ϕ-bearing D^0s, any linearization statement that could be generated would be ⟨D,D⟩—hence, unlinearizable. However, this is resolved by case assignment.

(69) a. **Unlinearizable structure:**



Linearization statements:
⟨D,D⟩, ⟨D,D⟩, ⟨D,D⟩

b. **Linearizable structure:**



Linearization statements (after suffixation):
$\langle D,D_{ERG}\rangle$, $\langle D,D_{DAT}\rangle$,
$\langle D_{ERG},D_{DAT}\rangle$

Dependent case is not the only strategy that languages use to differentiate between otherwise non-distinct nominals in the syntax. The remainder of this section explores other ways in which languages dissimilate nominals.

6.2 Further instances of dissimilation

The idea that languages are sensitive to a condition like UNIQUENESS has been pursued across modules and in a wide variety of languages. Here, again, I refer to Richards (2010), who discuss these different strategies

[42] For example, in a linearization statement like $\langle \alpha, \alpha \rangle$, the pair of α elements cannot be ordered relative to each other because they are non-distinct.

extensively, as well as Walter (2007) and Nevins (2012); this section offers only a small sampling of dissimilation strategies. What is crucial for our purposes is that the survey of patterns we see crosslinguistically seems to mirror certain recalcitrant constructions found in Yimas—allowing us an avenue towards incorporating these into our overall analysis.

6.2.1 Dissimilation strategies crosslinguistically

A particularly well-known case comes from the *spurious 'se'* effect seen in various Romance languages. In these languages, DAT and ACC clitics cannot cooccur; a would-be DAT clitic is instead realized as an featurally underspecified form, commonly a reflexive.[43] In their survey of Italian dialects, Manzini and Savoia (2005) show that the DAT clitic may also be realized as a partitive or locative, (70). As Bonet and Harbour (2012) note, these forms may be analyzed as different outputs of a morphological simplification rule operating on the DAT clitic.

(70) **Spurious 'se' effect in Italian dialects**

a. ***si*** *d du* 'aða
REFL(=to.him) it he.gives
'He gives it to him.' *(Làconi)*

b. ***nɛ*** *lu* 'dajɛ
PART(=to.him) it.M he.gives
'He gives it to him.' *(Nociglia)*

c. ***ɲdʒi*** *lu* 'danu
LOC(=to.him) it they.give
'They give it to him.' *(Celle di Bulgheria)*

(Manzini and Savoia, 2005, pp. 100, 105–107)

Additionally, deleting or displacing an entire morpheme is also crosslinguistically attested as a dissimilatory repair. Arregi and Nevins (2012) show that certain varieties of Basque exhibit *participant dissimilation*, banning certain combinations of two sequences of [PARTICIPANT] features.[44] 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, (71). Dissimilation-via-displacement is exemplified by the *double-o* constraint in Japanese, in which adjacent ACC-marked nominals are banned. Crucially, as shown by Saito (2002) (see also Richards 2010), this ban is circumvented by clefting one of the nominals, (72).

(71) **Ondarru Basque: Participant dissimilation resolved by deletion**[45]

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, p. 212)

(72) **Japanese: double-o constraint circumvented by clefting**

a. hanako-ga taroo-ni toti-**o** zyooto sita
Hanako-NOM Taroo-DAT land-ACC giving did
'Hanako gave Taroo a piece of land.'

b. *hanako-ga taroo-ni toti-**o** zyooto-**o** sita
Hanako-NOM Taroo-DAT land-ACC giving-ACC did
Intended: 'Hanako gave Taroo a piece of land.'

[43] Although Bonet (1991) and Nevins (2007) analyze the well-known spurious 'se' effect in Spanish as an instance of impoverishment, Bonet and Harbour (2012) point out that the Spanish facts, by themselves, can also simply be analyzed as allomorphy.

[44] See also Nevins and Sandalo (2011) on participant dissimilation in Kadiweu.

c. [hanako-ga taroo-ni zyooto-**o** sita no wa] toti-**o** da
[Hanako-NOM Taroo-DAT giving-ACC did C TOP] land-ACC is
'What H. gave to T. is a piece of land.' (Richards, 2010, pp. 111–112)

However, in Japanese, we find multiple ways of circumventing the double-o constraint. In addition to the clefting strategy shown in (72c), this constraint may be obviated by marking one of the ACC nominals with GEN case instead, (73). Thus, *case assignment* may also serve as a dissimilatory repair.

(73) **Japanese: GEN can also circumvent double-o constraint**

hanako-ga taroo-ni toti-**no** zyooto-**o** sita
Hanako-NOM Taroo-DAT land-GEN giving-ACC did
'Hanako gave Taroo a piece of land.' (Richards, 2010, p. 111)

6.2.2 Modal prefixes in Yimas, revisited

The relevance of the crosslinguistic dissimilatory data to Yimas comes from the novel observation that these effects *also surface in modal prefix constructions*. While I do not provide an analysis of these Yimas data, I hope that this discussion provides a foundation for future work. In particular, it introduces the possibility that modal-clitic interactions are dissimilatory in nature, which, in turn, suggests that modal prefixes and clitics must form a morphosyntactic class at some fundamental level.

We have already seen in §2 that the presence of a modal prefix triggers certain morphological effects on the adjacent ABS clitic. A (non-exhaustive) list of these prefixes is given below. Recall that these prefixes occupy C^0, and that C^0 immediately c-commands the highest clitic (ABS). That they are located high in the functional structure is suggested by the range of meanings associated with these morphemes, which all encode mood or illocutionary force.

(74) **Yimas modal prefixes**

a. *ka-* 'likelihood'
b. *ant-* 'potential'
c. *ta-* 'negation'
d. *m-* 'relativizer'
e. ∅ *~naŋ . . . -n* 'imperative'
f. *apu-* 'negative imperative'

There are at least five different allomorphic effects that surface. The choice of which effect takes place is somewhat idiosyncratic, depending on the choice of modal, the featural specifications of the affected clitic, and, in certain cases, whether the subject clitic outranks the object clitic along a hierarchy; see Foley (1991, pp. 251-276) for details. For instance, the constructions in (76a) and (77a) below contain the same types of arguments being cross-referenced (3PL subject acting on 1SG object), but display different effects due to the choice of modal. Similarly, in (76b), (77b), and (79), a single modal prefix (e.g. *ta-* 'negation') may trigger multiple effects.

In (75), the baseline constructions, there are no modals present, and the subject and object clitics given are ABS:

(75) **Baseline**

a. ***pu-*** *ŋa-* tay
3PL.ABS- 1SG.DAT- see
'They saw me.' (F196)

b. ***ama-*** wa- t
1SG.ABS- go- PERF
'I went.' (F196)

c. ***pu-*** *n-* tay
3PL.ABS- 3SG.ERG- see
'He saw them.' (F195)

[45] Following 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.

In (76), however, the relevant clitics are realized as ERG instead of ABS, in the presence of the prefixes *ka-* 'likelihood' and *ta-* 'negation.' This effect is only triggered on clitics crossreferencing subjects. Realizing a would-be ABS clitic as ERG has already been argued in §6.1 to be dissimilatory in nature.

(76) **Modal-clitic effect 1: ABS → ERG**

a. ka- ***mpu-*** *ŋa-* tput- n
LIKE- 3PL.ERG- 1SG.DAT- hit- PRES
'They are going to hit me.' (F266)

b. ta- ***ka-*** wa- t
NEG- 1SG.ERG- go- PERF
'I didn't go.' (F251)

In contrast, in (77), the prefixal ABS clitic is realized as a postverbal number morpheme. This occurs for ABS clitics crossreferencing both subjects and objects. This process—which morphologically displaces the ABS clitic from its expected position—is reminiscent of the syntactic displacement (clefting) pattern found in (72).

(77) **Modal-clitic effect 2: ABS- → -#**

a. ant- *ŋa-* tpul- c- ***um***
POT- (~~3PL.ABS-~~) 1SG.DAT- hit- PERF- PL(ABS)
'They almost hit me.' (F264)

b. ta- *ka-* am- war- ***uŋ***
NEG- (~~X.SG.ABS-~~) 1SG.ERG- eat- HAB- X.SG(ABS)
'I don't usually eat (sago).' (F255)

A third effect is given below. First, the postverbal plural number morpheme associated with a class V ABS clitic is *-ra*, (78). As (79) shows, however, in the presence of the modal *ka-* 'likelihood', the ABS clitic surfaces now takes this *ra* form. This, I propose, can be analyzed as an instance of *impoverishment*, since *ra* does not encode person, only number (and noun class) (cf. Harbour, 2008).

(78) **Class V plural ABS clitic vs. suffix**

a. amtra ***ya-*** *n-* am- t
food.V.PL V.PL.ABS- 3SG.ERG- eat- PERF
'He ate the food.' (F451)

b. takiŋkat ta- *kay-* wampak- ɲa- ***ra***
rock.V.PL NEG- (~~V.PL.ABS-~~) 1PL.ERG- throw- NR.PST- V.PL(ABS)
'We didn't throw the rocks yesterday.' (F255)

(79) **Modal-clitic effect 3: ABS → impoverishment**

a. wɲcmpt mpu-na-ra ka- ***ra-*** *ŋa-* taŋ- taw- n
name.V.PL 3PL-POSS-V.PL LIKE- V.PL- 1SG.DAT- COM- sit- PRES
'Their names will be mine.' (F266)

b. mara ama naŋkun ka- ***ra-*** taw- n
other.V.PL 1SG toward LIKE- V.PL- sit- PRES
'The others will stay with me.' (F266)

Finally, two more modal-clitic effects are given below. While these do not obviously correspond to any crosslinguistically attested dissimilatory effects, they are included here to further show that the modal-clitic interactions are morphological in nature (contra Phillips 1993, 1995). In (80), a would-be ABS 3rd person clitic (whether human or nonhuman) is realized as the invariant form *pu-*, which is homophonous to the 3PL ABS form; again, its number and class specifications are encoded as a suffix. This effect is exclusively triggered by the negation morpheme. In

(81), the ABS clitic remains unchanged (though a postverbal number morpheme again surfaces)—but the *modal prefix*, normally *ant-*, as seen in some examples above, is realized with an allomorphic form, *a-*.

(80) **Modal-clitic effect 4: ABS → 3PL ABS**

a. ta- ***pu***- wa- na- *rm*
NEG- 3ABS- go- NR.PST- DL(ABS)
'Those two didn't go yesterday.' (F252)

b. irpuŋi ta- ***pu***- tmuk- na- *ra*
coconut.palm.IV.PL NEG- 3ABS- call- NR.PST- IV.PL(ABS)
'The coconut palms didn't fall over yesterday.' (F254)

c. ta- ***pu***- *n*- tay- c- *um*
NEG- 3ABS- 3SG.ERG- see- PERF- PL
'He didn't see them.' (F257)

(81) **Modal-clitic effect 5: ant- → a-**

a. *pu*- tmuk- t
3PL.ABS- fall- PERF
'They fell down.' (F197)

b. **a**- *pu*- tmuk- r- *um*
POT- 3PL.ABS- fall- PERF- PL
'They almost fell down.' (F197)

The idiosyncratic appearance of the effects surveyed above strongly suggests that they are somehow triggered by the modals.[46] Why these particular effects? While a concrete answer is not immediately obvious, I believe it to be non-trivial that the exact patterns that we see in modal-clitic clusters in Yimas mirror crosslinguistically attested dissimilation strategies. If this is correct, then we must conclude that the modal prefixes and ABS clitics are morphosyntactically similar in some fundamental way, such that they too need to be dissimilated.

6.3 Summary

I have argued that dependent case assignment to Yimas clitics are fundamentally dissimilatory in nature—and, relatedly, that the assignment of dependent case also serves a dissimilatory function (Baker, 2015). Building on Wunderlich (2001), a morphosyntactic condition, UNIQUENESS, manifests in different ways across languages. In Yimas, it militates against multiple featurally non-distinct clitics; in other languages, it triggers morphosyntactic effects on non-distinguishable nominals. Empirically, this has afforded us a new characterization of seemingly idiosyncratic interactions between the modal prefixes and ABS clitics in Yimas—these effects are all notably attested as dissimilatory across languages.

7 Conclusion

In this paper, I have demonstrated that the crosslinguistic 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 have identified this principle as a well-formedness condition requiring that all elements within some

[46] Relatedly, they provide further evidence against an alternative approach by Phillips (1993, 1995), first brought up in §2.3 (see also the Appendix). Whereas the present analysis takes all doubled clitics to be ABS (caseless) by default, recall that Phillips takes subject clitics to be *underlyingly* ERG, with ABS morphology being enforced by the ABS Requirement. Under this view, subject clitics may be realized with their true ERG form if the ABS Requirement is independently satisfied (e.g. by a modal prefix). However, the scope of such an approach is too narrow, as it only captures the ABS-to-ERG effect shown in (76); additional morphological mechanisms must be invoked to account for the other four effects that surface, especially the effects that allow the ABS clitic to *remain* ABS in the presence of a modal.

local domain be sufficiently morphosyntactically distinct. Both dependent case assignment and the morphological rules for the ERG and DAT clitic paradigms in Yimas are dissimilatory responses that take place so that the UNIQUENESS condition is satisfied. More generally, this paper has provided novel evidence for the dependent theory of case assignment by investigating the phenomenon in an under-explored domain—the clitic cluster.

From a language-internal standpoint, this paper has offered a comprehensive reanalysis of the case and agreement system of Yimas, drastically departing from previous characterizations of the language. Along the way, I have demonstrated that some of the properties previously attributed to the language—for instance, a person-based split and an ABS requirement—do not actually exist upon closer examination. The analysis pursued in this paper instead takes ABS to be the default clitic paradigm; ERG and DAT surface in order to avoid sequences of multiple ABS clitics.

Finally, this paper has addressed the question of why such dependent case systems exist 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.

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Table 5 Organization of paradigms from Phillips (1993)

	ABS	ERG	NOM	ACC	DAT
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

A Previous analyses of the Yimas case and agreement system

This appendix supplements §2.3 of the paper. While the analyses in Phillips (1993, 1995) and Wunderlich (2001) differ from each other in the details, they face similar empirical shortcomings, as noted in the paper. Both analyses erroneously take ABS morphemes to be privileged in some sense, such that they must occur in all constructions. Both analyses also miss the observation that the DAT morphemes crossreferencing raised possessors trigger the same case patterns as participant internal arguments, suggesting that Yimas does not display a person-based ergative split.

A.1 Phillips (1993, 1995)

The analysis of Yimas pursued by Phillips (1993, 1995) has two main components. The first is that Yimas is a 'hybrid' polysynthetic agreement language that makes use of both argumental pronominal affixes (in the sense of Jelinek 1984) and agreement heads (cf. Baker, 1988); the second is that Yimas is subject to a special version of the Extended Projection Principle (Chomsky, 1981), whose satisfaction is reflected by the presence of ABS morphology. Phillips assumes the paradigmatic organization of the agreement forms given in Table 5.

Comparing this table to the one in §2.1 of the paper, notice that the ERG and DAT paradigms from that table are split into two paradigms each: ERG/NOM and ACC/DAT. Thus, for Phillips, there are no participant ERG or DAT morphemes, and no 3rd person NOM and ACC morphemes. Under his analysis, some of our earlier examples may be relabeled as (82).

(82) **A split ergative approach to Yimas (Phillips 1993, 1995)**

a. *pu-* ***n-*** tay
3PL.ABS- 3SG.ERG- see
'He saw them.' (F195)

b. *pu-* ***ka-*** tay
3PL.ABS- 1SG.NOM- see
'I saw them.' (F196)

c. *pu-* ***nan-*** tay
3PL.ABS- 2SG.ACC- see
'They saw you.' (F198)

Phillips also posits that the NOM/ACC participant-referencing morphemes are incorporated pronouns, while the 3rd person ERG/DAT morphemes and all ABS morphemes are true agreement heads that arise from feature checking. In this way, the characterization of Yimas as having a person-based ergative split extends beyond the observed morphological case patterns, as it holds implications for the linguistic typology of polysynthesis.

The ABS Requirement is covered by a Yimas-specific EPP (YEPP), which must be satisfied either by a feature-checking relationship between a functional head (e.g. T^0) and an argument—reflected by the presence of ABS agreement—*or* by a modal prefix. In (82a-b), the object checks T^0's features and is thus spelled out as ABS, while in (82c-d) the subject checks these features. However, when the YEPP is satisfied by a modal prefix, the true forms of the agreement morphemes are able to surface, since they are no longer overridden by the ABS Requirement. Consequently, intransitive subjects are not inherently ABS, but are rather underlyingly ERG or NOM, as shown below in (83a-b).

(83) **Default ERG/NOM emerges with modal prefix (Phillips 1993, 1995)**

a. ka- ***mpu***- ŋa- tput- n
POT- 3PL.ERG- 1SG.ACC- hit- PRES
'They are going to hit me.' (F266)

b. ta- ***ka***- wa- t
NEG- 1SG.NOM- go- PERF
'I didn't go.' (F251)

However, the notion of a YEPP is challenged by the fact that the ABS agreement morphemes are *optional*, which Phillips does not take into account. Consider the examples in (84)-(85) (using Phillips' glossing conventions). In (84a), there is no ABS morpheme present, and yet the sentence is grammatical; moreover, (84b-c) demonstrate that replacing the ACC form with ABS or getting rid of the ACC form altogether are both impossible. Under Phillips' analysis, the YEPP remains unchecked in (84a), even though the construction contains a 3rd person argument (the subject 'Mitchell') that should be able to check the YEPP.

(84) **ABS is not obligatory; ACC can surface alone**

a. Mitchell ***kra***- tay
Mitchell 1PL.ACC- see
'Mitchell saw us.' (F,p.c.)

b. #Mitchell *ipa*- tay
Mitchell 1PL.ABS- see
Intended: 'Mitchell saw us.' (F,p.c.)
(grammatical as 'We saw Mitchell.')

c. *ipa *na*- tay
1PL.PRON 3SG.ABS- see
Intended: 'He saw us.' (F,p.c.)

Similarly, the examples in (85) show that 3SG raised possessors, exponed with DAT morphology, trigger the same pattern. In the partial nominal-referencing example in (85b), we see an ABS-DAT pattern. In (85c), again we see that the YEPP apparently need not be checked.

(85) **ABS is not obligatory; 3rd person DAT can surface alone**

a. narm *p*- *mpu*- tpul- kamprak- r- ***akn***
skin.VII.SG VII.SG.ABS- 3PL.ERG- hit- break- PERF- 3SG.DAT
'They hit and broke his skin.' (F283)

b. narm *pu*- tpul- kamprak- r- ***akn***
skin.VII.SG 3PL.ABS- hit- break- PERF- 3SG.DAT
'They hit and broke his skin.' (F324)

c. narm tpul- kamprak- r- ***akn***
skin.VII.SG hit- break- PERF- 3SG.DAT
'They hit and broke his skin.' (F,p.c.)

These data are additionally problematic given that ACC and DAT do not form a natural class under Phillips' system, which takes participant ACC morphemes to be pronominal and 3rd person DAT morphemes to be agreement heads. They also contradict Phillips' characterization of Yimas as a person-based split ergative language.

Finally, data like (86) (mentioned but not explained in Phillips 1995) show the inadequacy of the YEPP from the opposite direction, as well as cast doubt on the idea that 3rd person subject agreement morphemes are underlyingly ERG, as revealed once the YEPP is controlled for by a modal prefix. First, in certain contexts, Yimas does allow 3rd person subjects to surface as ABS in the presence of a modal. In (86a), the ABS morpheme appears as homophonous with the ABS 3PL form. In (86b), we find a 3PL ABS morpheme cooccurring with a modal. These examples cannot be generated in Phillips' system, since the YEPP should be checked by the modal prefix.

Table 6 Organization of paradigms from Wunderlich (2001)

	NOM	ERG	ACC	DAT
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

(86) **Modal prefixes and ABS morphemes may cooccur**

a. ta- ***pu***- wa- na- *rm*
NEG- 3ABS- go -NR.PST- DL(ABS)
'Those two didn't go yesterday.' (F252)

b. **a**- *pu*- tmuk- r- *um*
POT- 3PL.ABS- fall- PERF- PL(ABS)
'They almost fell down.' (F197)

A second challenge for Phillip's ERG subject approach comes from the behaviour of nonhuman nominals. As mentioned in footnote 6 in §2.1, nonhuman nominals are divided into several noun classes. Crucially, as (87) shows, noun class distinctions are only encoded in the ABS paradigm, but are neutralized when the agreement morpheme is ERG (or DAT/ACC). This holds whether the ERG subject is transitive, or intransitive but cooccurring with a modal prefix. If subjects are ERG by default, as argued by Phillips, it is unclear why YEPP-checking should yield *more* morphological noun class distinctions than seen in their underlying ERG forms. Rather, the directionality of this contrast suggests the opposite—that these subjects are underlyingly ABS, and that noun class distinctions are lost when the would-be ABS morphemes are realized as ERG.

(87) **Noun class distinctions neutralized when ERG**

a. ***kacmpt*** payum ***ya***- *mpu*- yamal- wat
canoe.VIII.PL man.PL VIII.PL.ABS- 3PL.ERG- carve- HAB
'The men usually carve the canoes.' (F228)

b. ***nmpi*** *ka*- ***mpu***- tra- ya- n
leaf.VII.PL LIKE- 3PL.ERG- about- come- IMP
'Let the letters get distributed.' (F268)

To summarize, additional Yimas data argue against Phillips' YEPP, which is claimed to underlie the language's case alternations: (i) ABS morphology is *not* obligatory (even in the absence of a modal prefix), (ii) certain paradigms (e.g. ACC and DAT above) cannot be overridden by ABS, (iii) modal prefixes and ABS morphemes may cooccur, and (iv) the morphological profile of nonhuman nominals suggests that ABS is default.

A.2 Wunderlich (2001)

Wunderlich (2001) accounts for the distributions of the Yimas agreement paradigms in an Optimality Theoretic framework, characterizing the divergences from the expected forms as paradigmatic gaps and substitutions. For example, the ABS-DAT pattern—NOM-ACC for the remainder of this section, using Wunderlich's labels—involves replacing an ERG morpheme with its NOM equivalent, which is default. This substitution takes place to satisfy a high-ranked constraint that would otherwise be violated. Wunderlich's organization of the paradigms is given in Table 6. Like Phillips (1993, 1995), Wunderlich separates ACC and DAT into two non-overlapping paradigms; however, unlike Phillips, the ERG paradigm contains both participant and 3rd person forms.

Wunderlich's analysis features two major constraints, DEFAULT and UNIQUENESS. DEFAULT states that every

clitic cluster must contain a NOM morpheme, thus directly enforcing the ABS Requirement mentioned above. UNIQUENESS states that each paradigm may surface only once per clitic cluster. Other lower-ranked faithfulness constraints are violated in order to satisfy DEFAULT and UNIQUENESS; the internal ranking of these more violable constraints determines the exact morphological patterns that surface.

For example, Wunderlich accounts for the ERG-NOM (our ERG-ABS) and NOM-ACC (our ABS-DAT) alternation, repeated below as (88) with Wunderlich's labels, as follows. Wunderlich proposes that there are simply no 3rd person ACC forms in Yimas' inventory of nominal-referencing forms; this is a paradigmatic gap of the language. In the ergative patterning in (88a), DEFAULT is satisfied because the 3PL object marker is NOM, given that an ACC equivalent does not exist. UNIQUENESS prevents other unattested possibilities, e.g. *NOM-NOM, from surfacing. In (88b), an ERG-ACC patterning is ruled out by DEFAULT. Though there are actually two viable candidates—NOM-ACC and ERG-NOM—only the former is attested; to rule out the latter, Wunderlich posits an internal ranking of two MAX constraints, so that it is more fatal to alter the object-referencing form than the subject-referencing form.

(88) **Person-based alternation from paradigmatic gap and substitution**

a. *pu-* ***n-*** tay
3PL.NOM- 3SG.ERG- see
'He saw them.' (F195)

b. ***pu-*** *ŋa-* tay
3PL.NOM- 1SG.ACC- see
'They saw me.' (F196)

Although I adopt many of Wunderlich's insights in this paper—in particular, UNIQUENESS—the exact formulation of his system faces similar challenges as the ones outlined above. See also Harbour (2003) for a more in-depth critique.

First, like Phillips, Wunderlich assumes that the DAT paradigm only contains 3rd person forms, while the ACC paradigm only contains participant forms. However, recall the fact that the DAT forms that crossreference 3rd person raised possessors pattern identically to the ACC forms crossreferencing participant internal arguments, repeated below; the same NOM-DAT pattern surfaces.

(89) **DAT encoding raised possessors may trigger NOM-DAT**

narm ***pu-*** tpul- kamprak- r- *akn*
skin.VII.SG 3PL.NOM- hit- break- PERF- 3SG.DAT
'They hit and broke his skin.' (F324)

Given that the DAT and ACC paradigms are non-overlapping to begin with, the parallel behaviour shown above strongly suggests that they should be conflated into a single paradigm (as in Table 1 in §2.1), rather than kept separate. However, doing so then contradicts the idea that the "person-sensitive" alternation arises partly due to the inherent 3rd person gap in the ACC paradigm.

Another issue comes from the DEFAULT constraint, which, just as discussed above, is violated in examples not known to Wunderlich. Like Phillips, Wunderlich misses the fact that non-ACC/DAT morphemes are optional. These examples, repeated below as (90) (now using Wunderlich's glosses), are not predicted to be possible at all under his system, as the ACC and DAT forms should both surface as NOM.

(90) **Non-ACC/DAT forms may be omitted, violating DEFAULT**

a. Mitchell *kra-* tay
Mitchell 1PL.ACC- see
'Mitchell saw us.' (F,p.c.)

b. narm tpul- kamprak- r- *akn*
skin.VII.SG hit- break- PERF- 3SG.DAT
'They hit and broke his skin.' (F,p.c.)

Finally, this proposal is challenged by the behaviour of the modal prefixes. For Wunderlich, two high-ranked constraints, INIT(mod) and INIT(nom), function to anchor these elements to the left edge of the word, with

INIT(mod) being the higher-ranked of the two. Substituting a NOM morpheme with an ERG form may therefore satisfy INIT(mod) while circumventing a violation of INIT(nom) (both INIT constraints dominate DEFAULT, thus allowing constructions with no NOM morphemes). However, as with Phillips' analysis, this misses the fact that the modal prefix and the NOM morpheme may in fact cooccur in limited circumstances, repeated below as (91); such examples should fatally violate INIT(nom) and should therefore not be attested.

(91) **Modal prefixes and NOM morphemes may cooccur**

a. ta- ***pu***- wa- na- *rm*
NEG- 3ABS- go- NR.PST- DL(ABS)
'Those two didn't go yesterday.' (F252)

b. **a**- ***pu***- tmuk- r- **um**
POT- 3PL.NOM- fall- PERF- PL(ABS)
'They almost fell down.' (F197)

More broadly, a divergence between Wunderlich's system and the one advocated for in this paper concerns the exact relationship between the agreement paradigms. For Wunderlich, the relationship between the ERG/DAT/ACC and NOM paradigms is *subtractive*, in the sense that a featurally more specified morpheme (ERG/etc.) is realized with a featurally underspecified or default morpheme (NOM). This is *prima facie* reminiscent of impoverishment. At the same time, however, an impoverishment-based approach is difficult to maintain conceptually; the environments that yield the impoverished or default forms cannot be straightforwardly delineated, given the ubiquity of the NOM paradigm.

Conversely, in the present paper, the relationship is *additive*; as discussed throughout §2.4 and §3, the agreement morphemes are all underlyingly NOM (ABS in this paper), but may be realized with another paradigm in particular environments. This derives the wide and varied distribution of the NOM morphemes. This is additionally important for the paper's core proposal that the Yimas agreement morphemes exhibit dependent case patterns; dependent case theory follows a similar additive logic.