Clitic dissimilation and dependent case*

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1 Introduction

According to the traditional view of case (e.g. Chomsky, 1981, 1995, et seq.), Case is assigned by dedicated functional heads (e.g., T^0, v^0) in order to license nominals.

In contrast, the dependent theory of case posits that morphological case assignment is determined by a nominal’s structural position relative to other nominals rather than relative to a functional head.

Dependent case: Morphological case assigned to an argument according to its c-command relationship with another argument in some local domain:

(1) a. ERG assigned to higher of two DPs
   \[\text{DP}_{\text{ERG}} \rightarrow \text{DP} \]
   b. ACC assigned to lower of two DPs
   \[\text{DP} \rightarrow \text{DP}_{\text{ACC}} \]
   c. DAT assigned to intermediate of three DPs
   \[\text{DP} \rightarrow \text{DP}_{\text{DAT}} \]

→ The distribution of dependent case is determined solely by morphosyntactic context, irrespective of the availability of certain functional heads.

This talk provides novel support for dependent case theory, but also argues for a reinterpretation of the logic behind the theory.

The empirical basis of this talk comes from the clitic system of Yimas (Lower Sepik; Papua New Guinea).

In Yimas, grammatical relations are encoded on a series of optionally doubled clitics, whose associated nominals are morphologically invariant.

Crucially, the morphological form of a clitic, drawn from one of three paradigms, covaries with the total number of clitics present, even when the sentence-level syntax is held constant:

(2) Morphological alternations on Yimas clitics
   a. tpuk \text{ka-ka-na-tmi-am-n} \text{[a]kn}\n      sago pancake.X x.SG.A-1SG.B-DEF-CAUS-eat-PRES-3SG.C
      ‘I made \text{him} eat a sago pancake.’ (F292)
   b. irwa \text{naaykum} \text{ma-mpu-tmi-ampa-t}\n      mat.1X.SG woman 3SG.A-3PL.B-CAUS-weave-PERF
      ‘The women got \text{her} to weave a mat.’ (F292)

→ Yimas thus displays dependent case patterns within its clitic system: Both the Yimas clitic forms and dependent case are sensitive to morphosyntactic context, albeit in different structural domains.

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That we find the same effects cross-cutting different structural domains is suggestive of a broader principle underlying both systems.

- **Proposal:** Both are *dissimilatory responses* to a universal well-formedness condition mandating distinctness between otherwise non-distinct elements (cf. Richards, 2010).
  - I show that, in Yimas, the different clitic forms surface in order to avoid multiple case-invariant clitics.
  - Dependent case is similarly reformulated as a way of differentiating nominals (Baker, 2015).

This has significant ramifications for our understanding of morphological case.

- In particular, it reveals that what we call ‘dependent case’ is really a subtype of a much more general phenomenon—*dissimilation*—which is instantiated as dependent case when applied to nominals at the sentence level.

**Roadmap:**

§2 reviews the Yimas clitic system + some syntactic assumptions

§3 presents the morphological alternations on the clitics

§4 presents a derivation of these alternations

§5 shows that the same alternations are found in dependent case systems cross-linguistically

§6 argues for a unified dissimilation-based account of both systems

**2 Yimas morphosyntax**

**2.1 The clitic system**

- All of the Yimas examples in this talk come from William Foley’s (1991) grammar of Yimas or personal communication with the author; *citation convention:* (F[pg.#]). The data in the grammar were drawn from extensive fieldwork conducted by William Foley between 1977 and 1988.¹

- Yimas generally encodes grammatical relations on verbal inflectional morphology, organized into the paradigms in (3).

(3) *Yimas clitic paradigms*

<table>
<thead>
<tr>
<th></th>
<th>Pronoun</th>
<th>Set A</th>
<th>Set B</th>
<th>Set C</th>
</tr>
</thead>
<tbody>
<tr>
<td>1sg</td>
<td>ama</td>
<td>ama-</td>
<td>ka-</td>
<td>ηa-</td>
</tr>
<tr>
<td>1dl</td>
<td>kapwa</td>
<td>kapwa-</td>
<td>ηkra-</td>
<td>ηkra-</td>
</tr>
<tr>
<td>1pl</td>
<td>ipwa</td>
<td>ipwa-</td>
<td>kay-</td>
<td>kra-</td>
</tr>
<tr>
<td>2sg</td>
<td>mi</td>
<td>ma-</td>
<td>n-</td>
<td>nan-</td>
</tr>
<tr>
<td>2dl</td>
<td>kapwa</td>
<td>kapwa-</td>
<td>ηkran-</td>
<td>ηkul-</td>
</tr>
<tr>
<td>2pl</td>
<td>ipwa</td>
<td>ipwa-</td>
<td>nan-</td>
<td>kul-</td>
</tr>
<tr>
<td>3sg</td>
<td>na</td>
<td>na-</td>
<td>n-</td>
<td>-(n)akn</td>
</tr>
<tr>
<td>3dl</td>
<td>impa</td>
<td>impa-</td>
<td>mpi-</td>
<td>mpn-</td>
</tr>
<tr>
<td>3pl</td>
<td>pu</td>
<td>pu-</td>
<td>mpui-</td>
<td>-mpun</td>
</tr>
</tbody>
</table>

- Three paradigms, which I’ll refer to as *sets A, B, and C*. Each cell encodes the person and number features of the cross-referenced nominal.²

- The set A forms are identical to the pronouns.³

- On a verb, the morpheme order is strictly A-B-C (4). I assume that the morpheme order is the result of a linearization process, which takes place after paradigms are determined.

(4) *A > B > C morpheme order*

k-ka-tkam-r-akn

v1sg.a-1sg.b-show-perf-3sg.c

‘I showed him it (the coconut).’ (F211)


²Though many previous analyses of Yimas discuss these paradigms as making distinctions for *morphological case* (Phillips, 1993, 1995; Wunderlich, 2001), I am using the theory-neutral terminology from Gluckman (2014).

³Set A is the only paradigm to also make distinctions for non-human nominals. Yimas has several additional noun classes (glossed with roman numerals throughout) and two types of embedded complements, that are also able to be cross-referenced on the verb.

(5) Clitic forms track grammatical function

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

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

c. k-mpu-ya-tkam-t
   V1.SG.A-3PL.B-1SG.C-show-PERF
   ‘They showed me it (the coconut).’ (F208)

d. k-ka-tkam-r-akn
   V1.SG.A-1SG.B-show-PERF-3SG.C
   ‘I showed him it (the coconut).’ (F211)

The paradigm sets A, B, and C are thus strongly reminiscent of absolutive, ergative, and dative case respectively.

(6) Paradigm-case correspondences

<table>
<thead>
<tr>
<th>Clitic paradigm</th>
<th>Morphological case</th>
</tr>
</thead>
<tbody>
<tr>
<td>Set A</td>
<td>ABS</td>
</tr>
<tr>
<td>Set B</td>
<td>ERG</td>
</tr>
<tr>
<td>Set C</td>
<td>DAT</td>
</tr>
</tbody>
</table>

The examples presented thus far are ones in which the clitic paradigms map straightforwardly to particular grammatical functions/thematic roles.

However, sometimes these mappings break down. The rest of this talk focuses on why this happens and how it informs our understanding of dependent case.

2.2 Clitic doubling and clitic movement

The nominals cross-referenced by the clitics need not be overtly expressed; however, when present, these nominals are morphologically unmarked (oblique arguments cannot be clitic doubled).

(7) Unmarked nominals may be clitic doubled but obliques may not

a. narmaŋ namat pu-n-tu-t
   woman men  3PL.A-3SG.B-kill-PERF
   ‘The woman killed the men.’ (F90)

b. panmal ñaykum kantk na-na-wa-n
   man women with 3SG.A-DEF-go-PRES
   ‘The man is going with the women.’ (F108)

Though various previous analyses of Yimas take the cross-referencing morphemes to be true agreement (i.e., the exponents of φ-feature valuation via Agree) (Phillips, 1993, 1995; Gluckman, 2014), there is much evidence to suggest that these are actually doubled clitics.4

First, assuming that both clitics and pronouns are D0s with φ-features (Postal, 1966; Abney, 1987), this captures why the doubled clitics are identical to the independent pronouns of the language:

(8) Identity between set A and pronouns

<table>
<thead>
<tr>
<th></th>
<th>1sg</th>
<th>1dl</th>
<th>1pl</th>
<th>2sg</th>
<th>2dl</th>
<th>2pl</th>
<th>3sg</th>
<th>3dl</th>
<th>3pl</th>
</tr>
</thead>
<tbody>
<tr>
<td>Set A</td>
<td>ama-</td>
<td>kapa-</td>
<td>ipa-</td>
<td>ma-3</td>
<td>kapwa-</td>
<td>ipwa-</td>
<td>na-</td>
<td>impa-</td>
<td>pu-</td>
</tr>
<tr>
<td>Pronoun</td>
<td>ama-</td>
<td>kapa-</td>
<td>ipa</td>
<td>mi</td>
<td>kapwa</td>
<td>ipwa</td>
<td>na</td>
<td>impa</td>
<td>pu</td>
</tr>
</tbody>
</table>

4In Foley (1991), these morphemes are referred to as ‘pronominal affixes.’

5The 2SG clitic form is the only one that is not exactly identical to the corresponding pronominal. I am not sure why this is.
**Important:** This identity holds only for the set A forms; the pronominals invariably surface as in (8). In contrast, the set B and C forms look nothing like the pronouns—perhaps a surprising result, if these are the output of clitic doubling as well.

- **However, deriving this non-identity will be a central part of this talk.**

Second, and more importantly, these clitics are not obligatory; Yimas allows verbs with no clitic doubling (9a), partial clitic doubling (9b), and full clitic doubling (9c).

- Each example in (9) contains two syntactic arguments but differs in the total number of clitics present.

(9) **Clitic doubling is optional**

a. numn-mat Kampramanan wapal-cap-mpi
   villager-PL place name climb-CMPL-IRR
   ‘The villagers all climbed Kampramanan.’ (F471)

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

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

The occurrence of clitic doubling is discourse-sensitive, as the clitics generally cross-reference discourse-established referents (a property exhibited by clitic systems cross-linguistically—see Rudin (1997), Kallulli (2008), Johns and Kučerová (to appear), among others).

To account for the information structural correlates of clitic doubling, I propose that **doubled clitics move to the CP domain.**

**Assumed derivation for clitic doubling and movement**

1. Clitics are D₀’s generated in a Big DP and receive the φ-features of their associated nominals by Agree (Torrego, 1988; Uriagereka, 1995; Arregi and Nevins, 2012, a.o.) (10).

2. The clitics then undergo long head movement to Spec-CP (Nevins, 2011; Harizanov, 2014). Multiple iterations of clitic movement tuck in (Richards, 2001), preserving the order of base-generation (11).

3. In the postsyntactic component, the clitics in Spec-CP undergo successive m-merger (Matushansky, 2006) (12).

→ **I assume that the final output of m-merger in (12) is still order preserving:** The structural hierarchy of clitics on C₀ corresponds to the structural hierarchy of the nominals being doubled.

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6 Independent support for this comes from the fact that the doubled clitics interact with other CP-level morphemes expressing various forms of modality or mood, which I take to be complementizers in C₀, following (Phillips, 1993, 1995). This is discussed in the Appendix.
To sum up:

- Yimas encodes grammatical relations on a series of preverbal morphemes, which I take to be doubled clitics. The morphemes may be realized as set A, B, or C, which correspond roughly to ABS, ERG and DAT case respectively.
- Clitics are D0s generated within a Big DP structure and are valued via Agree with their associates; they undergo information structure-driven movement to Spec-CP.
- M-merger applies in the postsyntax, resulting in the formation of a clitic complex on C0. The clitics on C0 are in the same hierarchical order as the doubled arguments in the clause.

3 Morphological alternations

3.1 Overview

Main points:

- Though it was noted earlier that the clitic paradigms correspond to morphological case on nominals, these correspondences only hold under a dependent treatment of case.
- This is because the Yimas clitic system exhibits paradigmatic alternations, sensitive to the total number of clitics present on C0, independent of the number of syntactic arguments.
  - Subject clitics alternate between set A∼B, while applied argument7 clitics alternate between set A∼C (direct object clitics do not alternate at all, but rather remain set A).

- The similarity to dependent case comes from the fact that the alternations are determined configurationally:
  - Set B is found on the higher of two clitics on C0, while set C is found on the intermediate of three clitics on C0—just like dependent ERG and DAT case on nominals.

> More generally, the behaviour of the Yimas clitics reveals a dissociation between morphological form and thematic role. Set B and C are available whenever the prerequisite realizational environments are met internal to the clitic cluster.

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7 In this talk, I will use the term ‘applied argument’ to refer to goals, causees, and applicatives.
3.2 Alternations on subject clitics

As illustrated earlier, subjects of intransitive verbs and subjects of transitive verbs may be cross-referenced with set A and set B morphology respectively:

(14) **Subject clitics are A or B**

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

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

While this looks like a standard ERG-ABS pattern, actually **all subjects may be cross-referenced by set A or set B, regardless of transitivity.**

- Evidence from optional clitic doubling and valency-changing processes such as applicativization.

Optional clitic doubling:

- The optionality of clitic doubling yields a mismatch between the number of clitics on C\(^0\) and the total number of arguments in the syntax.

- Partial doubling constructions reveal that the morphological alternations surface even when sentence-level syntax stays constant.

- In (15), the form of the 3SG clitic covaries with the presence vs. absence of a clitic cross-referencing the nominalized embedded complement.

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

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

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

→ Set B is only possible on a given clitic if there is another (lower) clitic on C\(^0\).

Applicativization:

- Applicativization promotes an otherwise-oblique nominal to core status, and thus allows an additional clitic to be doubled.

- In applicativized contexts, clitics cross-referencing intransitive subjects may be realized as set B.

(16) **Applicative of unergative verb**

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

b.  **na-tankway-iray-ncut**  
    3SG.A[3SG.B]-APPL-cry-RM.PST  
    ‘He cried over her.’ (F315)

(17) **Applicative of unaccusative verb**

a.  impa-n kantk  
    3DL.FR.DIST with 3SG.A-rise-PERF  
    ‘He got up with them both.’ (F303)

b.  impa-tan-kwalca-t  
    3DL.A[3SG.B]-APPL-rise-PERF  
    ‘He got up with them both.’ (F303)
Conversely, clitics cross-referencing transitive subjects are unaffected by applicativization, since there are already two clitics on C^0 prior to the addition of the applied argument clitic. As a result, transitive subject clitics are set B with and without applicativization:

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

a. na-\textit{ka}wayk-t  
\textit{V.SG.A}-\text{1SG.B}-buy-PERF  
‘I bought it.’ (F230)

b. Mitchell kat ya-\textit{ka}-\textit{ta}-wayk-r-\textit{a}kn  
Mitchell card.V.PL \textit{V.PL.A}-\text{1SG.B}-APPL-buy-PERF-\text{3SG.C}  
‘I bought (a pack of) cards for Mitchell.’ (F307)

The fact that we see set B morphology cross-referencing intransitive subjects (even unaccusative subjects) demonstrates that the paradigmatic alternations are \textit{not} controlled by thematic role or transitivity.

In sum, set B is possible on a given clitic if it co-occurs with—and c-commands—another clitic. Below, I show that the set C paradigm exhibits a similar behaviour.

3.3 Alternations on clitics encoding applied arguments

As shown in (19), various kinds of applied arguments may be cross-referenced with set C morphology.

(19) Set C clitics cross-reference applied arguments

a. k-\textit{ka}-tkam-r-\textit{a}kn  
\textit{V1.SG.A}-\text{1SG.B}-show-PERF-\text{3SG.C}  
‘I showed him it (the coconut).’ (IO) (F211)

b. tpuk ka-\textit{ka}-na-tmi-am-nt-\textit{a}kn  
sago pancake.X \textit{x.SG.A}-\text{1SG.B}-DEF-CAUS-eat-PRES-\text{3SG.C}  
‘I made him eat a sago pancake.’ (causee) (F292)

c. kat ya-\textit{ka}-\textit{ta}-wayk-r-\textit{a}kn  
card.V.PL \textit{V.PL.A}-\text{1SG.B}-APPL-buy-PERF-\text{3SG.C}  
‘I bought (a pack of) cards for him.’ (applicative) (F307)

However, as with set B, the realization of set C morphology on a given clitic is dependent on the surrounding clitic context.

Clitics cross-referencing applied arguments thus also exhibit paradigmatic alternations; these clitics surface with set A morphology when the appropriate context fails to be met.

The generalization: Set C surfaces on a clitic that both c-commands a lower clitic and is c-commanded by a higher clitic (cf. Harley, 1995; Podobryaev, 2013).

– Once again, I provide arguments from applicativization and optional clitic doubling.

Applicativization:

As with the previous section, we find a split between applicativized intransitive and transitive verbs.

In contrast to the examples in (19), which all have set C applied arguments, these same arguments are cross-referenced by set A morphology in intransitive contexts:
(20)  

**Form of applied argument clitics sensitive to transitivity**

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

b.  
\[
[\text{na-taŋkway-iray}-\text{cut}]
\]
\[
[3SG.A]-3SG.B-APPL-cry-RM,PST
\]
‘He cried over her (looking at her body).’  *(applicativization of unergative)*  (F315)

c.  
\[
\text{impa-ntaŋ-kwalca-t}
\]
\[
[3DL.A]-3SG.B-APPL-rise-PERF
\]
‘He got up with them both.’  *(applicativization of unaccusative)*  (F303)

→  Set C is realized on a clitic in the presence of two other clitics (three in total), but is unavailable otherwise.

**Optional clitic doubling:**

- Like set B, set C is truly controlled by *clitic context*. Partial doubling removes a clitic from C⁰ (in (21b), the direct object clitic is missing) and correspondingly removes set C morphology on the causee clitic:

(21)  

**Set C unavailable in partial doubling**

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

b.  
\[
\text{irwa } \text{ŋaykum na-\text{mpu-tmi-ampa-t}}
\]
\[
\text{mat.IX.SG woman } [3SG.A]-3PL.B-CAUS-weave-PERF
\]
‘The women got her to weave a mat.’  (F292)

3.4 **Section summary**

- The Yimas clitic system exhibits context-sensitive morphological alternations in a way that is highly reminiscent of the distribution of dependent case on nominals.

- In Yimas, subject clitics alternate between sets A∼B, while clitics cross-referencing applied arguments alternate between sets A∼C.

- These alternations are controlled by the total number of clitics present: set B requires the presence of one other clitic, while set C requires the two other clitics.

→ Below, I will unify the observations shown throughout this section with the derivation of clitic doubling and movement from §2.
4 Deriving the alternations

In this section, I propose that set B and C are triggered by morphological rules that reference the syntactic structure of the clitic complex on $C^0$, calculated internal to the clitic complex.

- Thus, contrary to recent work arguing that dependent case assignment takes place in the syntax proper (Baker and Vinokurova, 2010; Preminger, 2011, 2014; Poole, to appear, a.o.), the morphological rules for the Yimas clitic paradigms apply in the postsyntactic component, after m-merger.

- However, I remain agnostic about the timing of dependent case on nominals; in fact, the broader moral of this talk (dissimilation) crosscuts differing views of when case assignment takes place.

As discussed in §2.2, the input and output of m-merger both preserve the hierarchical order of the doubled arguments in the clausal syntax ($\text{subj} > \text{IO} > \text{DO}$).\(^8\)

(22) a. Before m-merger  
\[
\begin{array}{c}
\text{CP} \\
\text{Cl}_{\text{subj}} \\
\text{Cl}_{\text{IO}} \\
\text{Cl}_{\text{DO}} \\
\text{TP} \\
\text{Ø} \\
\end{array}
\]

b. After m-merger  
\[
\begin{array}{c}
\text{CP} \\
\text{C} \\
\text{Cl}_{\text{subj}} \\
\text{Cl}_{\text{IO}} \\
\text{Cl}_{\text{DO}} \\
\text{Ø} \\
\text{TP} \\
\end{array}
\]

A new generalization:

- Recall that, whereas subject clitics and applied argument clitics alternate, direct object clitics are always set A.

- Conversely, non-direct object clitics may only surface as set A in the absence of a direct object clitic.

- More generally, set A is always realized on the structurally lowest clitic on $C^0$.

(23) The lowest clitic on $C^0$ is realized as set A

\[
\begin{array}{c}
a. \\
\text{C} \\
\text{Cl}_{\text{subj}} \\
\text{Cl}_{\text{IO}} \\
\text{Cl}_{\text{DO}} \\
\text{Ø} \\
\text{set A} \\
\end{array}
\]

\[
\begin{array}{c}
b. \\
\text{C} \\
\text{Cl}_{\text{subj}} \\
\text{Cl}_{\text{IO}} \\
\text{Cl}_{\text{DO}} \\
\text{Ø} \\
\text{set A} \\
\end{array}
\]

\[
\begin{array}{c}
c. \\
\text{C} \\
\text{Cl}_{\text{subj}} \\
\text{Cl}_{\text{IO}} \\
\text{Cl}_{\text{DO}} \\
\text{Ø} \\
\text{set A} \\
\end{array}
\]

→ This explains why direct object clitics do not alternate—they are always structurally lowest on $C^0$.

\(^8\)Recall that the input of m-merger consists of clitics that have undergone movement to Spec-CP.

\(^9\)I assume, following Iatridou (1990) and Preminger (2009), that clitics must be clausemates with their associates; this rules out the possibility of cross-clausal clitic doubling, which is, as far as I am aware, not attested in Foley (1991).
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Morphological rules on Yimas clitics

a. A clitic \( \alpha \) is realized with a set B form if it c-commands a clitic \( \beta \) within a clitic domain.

b. A clitic \( \alpha \) is realized with a set C form if it c-commands a clitic \( \beta \) and is c-commanded by a clitic \( \gamma \).

c. If both rules can apply to a clitic structure, apply rule b. before rule a.

d. Clitics already marked as set B and C are rendered invisible for further applications of a. and b.

Schematization of (24); c-command relations represented by dashes

Note that there is no rule for set A. This is because set A seems to have an elsewhere distribution, surfacing where sets B and C cannot. This will be discussed in greater detail in §5.

In summary, I proposed that the clitic alternations be derived via morphological rules (24) that make reference to the structural configuration of the clitics on \( C^0 \).

The morphological rules are upwards-oriented; set B is realized on the higher of two clitics, while set C is realized on the intermediate of three clitics. The lowest clitic remains set A.

These are isomorphic with dependent case assignment rules (see §1). The parallel between the Yimas clitic system and the dependent case system is the topic of §5 below.

5 Dependent case

5.1 Overview

In this section, I demonstrate that the behaviour of the Yimas clitics exactly mirrors the distributions of dependent ERG and DAT case.

Just as Yimas exhibits clitic alternations, we may understand dependent case as context-sensitive morphological alternations on nominals.

The effects of this parallelism are twofold:

(i) It provides strong support for the existence of dependent case, as the Yimas clitic patterns cannot be linked to any other theory of case.

(ii) It shows that the phenomenon we know as ‘dependent case’ is much more general than previously assumed.
5.2 Ergative case

- Ergative case is assigned to the higher of two case-receiving nominals within some local domain (Marantz, 1991).

- The dependent case system is often empirically indistinguishable from other systems of case assignment that make use of functional heads (e.g., $v^0$).

- For example, the Shipibo data below are in principle compatible with numerous analyses of ergativity (Wolfford, 1997, 2006; Legate, 2002; Rezac et al., 2014, a.o.).

\[(27)\]

*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.ABS go-PRF
   ‘Maria went.’ (Baker, 2014)

- However, Baker (2014) provides additional data that resist analysis under functional-head theories of ERG case.

- **All Shipibo subjects are able to take ERG or ABS when syntactic conditions warrant.** This follows straightforwardly from a dependent case approach to ERG case assignment . . . and also sounds remarkably similar to the behaviour of subject clitics in Yimas (§3.2).

**Evidence from applicativization:**

\[(28)\]

*Shipibo: Applicativization feeds ERG case*

a. Jose-kan-ra Rosa atapa rete-xon-ke
   Jose-ERG-PRT Rosa hen kill-APPL-PRF
   ‘Jose killed a hen for Rosa.’ *(applicative of transitive)*

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

c. nokon shino-n-ra e-a mawa-xon-ke
   my.GEN monkey-ERG-PRT me-ABS die-APPL-PRF
   ‘My monkey died on me.’ *(applicative of unaccusative)* (Baker, 2014)

- **ERG case assignment in Shipibo is simply dependent on the presence of some lower argument, regardless of the properties of the subject on its own.**

**A similar pattern emerges in NOM-ACC systems:**

- Some Turkic languages (e.g., Sakha) allow embedded subjects to undergo A-movement into the matrix clause (29).

- Crucially, such processes feed the possibility of ACC case assignment even when the matrix predicate is intransitive, suggesting that the source of ACC case cannot be $v^0$.

- Under dependent case theory, the raised embedded subject receives ACC case simply because it is sufficiently local to the matrix subject.
(29) **Sakha: Raising feeds ACC case regardless of transitivity of matrix predicate**

a. min [ sarsyn **ehigi** kel-ix-xit dien ] ihit-ti-m
   I tomorrow you(NOM) come-FUT-2PL that hear-PST-1SG
   ‘I heard that tomorrow you will come.’

b. Masha Misha-ny [ yaldj-ya dien ] tönün-ne
   Masha Misha-ACC fall.sick-FUT.3SG that return-PST.3SG
   ‘Masha returned (for fear) that Misha would fall sick.’ (Baker and Vinokurova, 2010)

Context-sensitive morphological alternations are thus attested across languages and in different structural domains.

- The morphological case of a nominal is affected by the presence of some other nominal in a domain of case computation (e.g., a syntactic phase), just as the paradigmatic realization of a Yimas clitic is determined by the presence of other clitics in the C⁰-domain.

### 5.3 Dative case

- Although it is often assumed that DAT is inherent, lexical, or structural (Marantz, 1984; Woolford, 1997, 2006), **I suggest that at least some instances of DAT case are dependently assigned**, building on Harley (1995) and Podobryaev (2013).

- Dependent DAT case is assigned to a nominal that both c-commands a caseless nominal and is c-commanded by a caseless nominal within the relevant minimal domain (Podobryaev, 2013).

- **As with ERG case above, nominals in ERG-ABS systems often exhibit alternations between DAT and ABS.**

An illustration from Alutor causatives (Podobryaev, 2013):⁹

- In Alutor, DAT case on the causee of a tri-argumental construction is replaced by ABS when the direct object undergoes noun incorporation (31).

- This is perhaps surprising under a traditional view of DAT case, if the source of DAT case is expected to be available regardless of whether incorporation takes place or not.

- However, it follows straightforwardly from a dependent case approach that assumes that incorporated nominals do not participate in the case computation.

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

a. gəm-nan akək tə-nə-svitku-ə-tək-ən uțte-ʔut
   ‘I am making the son cut wood.’

b. gəm-nan akək tə-nə-svitku-ə-tək-ən
   ‘I am making the son cut wood.’ (Podobryaev, 2013)

Thus, although DAT case is traditionally taken to be inherent or structurally assigned, **this need not be the case**. Evidence from the behaviour of causees suggests that the number of arguments present in the syntax is also a determinant for DAT case.

⁹See also Harley (1995) for similar alternations in Japanese causatives.
5.4 Taking stock

Whereas in §4 I showed that Yimas exhibits morphological alternations within its clitic system, this section demonstrated that nominals also display morphological alternations—this is dependent case.

- That we see the same patterns obtain in both systems strongly suggests that they are separate instantiations of a single phenomenon.
- §6 below discusses the nature of this phenomenon in greater detail.

6 A dissimilation-based account

6.1 Overview

Main point: Both dependent case on nominals and the Yimas clitic alternations are domain-specific instantiations of morphosyntactic dissimilation.

(32) Core assumptions (building on Richards (2010))

a. Languages are universally subject to an anti-identity requirement mandated by the grammar. This well-formedness condition requires that the members of some prespecified domain be distinguishable from one another.

b. Non-identity is necessary for linearization; linearization statements consisting of non-distinct elements (e.g., \(<\alpha, \alpha>)\) are contradictory.

c. Languages make use of various different syntactic and postsyntactic strategies to satisfy this anti-identity requirement.

→ Applying set B and C morphology to clitics and dependent case to nominals allows for the dissimilation of otherwise indistinguishable elements, thus repairing violations of this anti-identity condition.

More generally, this section addresses why languages make use of dependent case systems in the first place—an aspect of the theory that has remained underexplored.

- The idea put forth here converges with the only discussion of this question in the literature: in Baker (2015), it is suggested that dependent case is a ‘sharpening’ of the functionalist view that morphological case differentiates nominals from one another (see e.g. Comrie, 1978).

- Once again, we will see that Yimas provides empirical evidence for a dissimilation-based account: In Yimas, we can see that the clitic alternations are driven by the need to avoid sequences of multiple set A clitics.

- Given the parallels between these clitic alternations and dependent case cross-linguistically, we may conclude that dependent case is also a strategy of dissimilation.

6.2 The status of set A

- Recall that the set A paradigm has an elsewhere distribution, in that it surfaces precisely where sets B and C cannot.

- Proposal: Clitics are ‘born’ as set A—set A simply being the default spell-out of a D⁰—but may in certain cases be realized instead with set B or C morphology.

→ Under this view, the task becomes understanding what triggers sets B and C on the clitics.
Revisiting two key properties from §2:

(i) Both clitics and pronouns are spell-outs of φ-feature-bearing D0s. A result of this is that the set A clitic paradigm is morphologically identical to the language’s pronouns.

(ii) The pronouns are morphologically invariant, regardless of their grammatical function or thematic role. This is shown more clearly in (34):\(^\text{11}\)

11 Setting aside oblique nominals, which may not be clitic doubled.

(34) Sentence-level pronominals are invariant

a. [kapwa] \(\text{tanka-mpi} \) [kapwa-wa-t]

\(\text{2DL} \)

where-ADV 2DL.A-go-PERF

‘Where have you gone?’ (Intransitive subject) (F458)

b. [kapwa] na-ŋkran-a-aykapiña-n

\(\text{2DL} \)

3SG.A-2DL.B-DEF-know-PRES

‘Do you two know him?’ (Transitive subject) (F462)

c. [kapwa] ŋkut-na-ira-kwalca-kia-k\(^\text{12}\)

\(\text{2DL} \)

2DL.C-DEF-ALL-rise-FUT-IRR

‘I will come up on you.’ (Applied object) (F460)

\(\text{\rightarrow In (34b-c), the form of the clitic and the form of the pronoun do not match.}\) Yet, the properties listed above predict that clitic doubling should always output a set A clitic.

- In other words, doubled clitics may be prevented from being realized with their default morphology.

### Proposal:

Yimas bans multiple set A (default) clitics because they are morphosyntactically indistinguishable from one another.

- This is resolved by realizing the clitics with set B and C morphology.

- A dissimilation-based treatment explains why the set B and C forms only surface when there are multiple doubled clitics on C\(^0\)—anti-identity is vacuously satisfied when there is only one clitic. This also captures why Yimas allows one clitic to remain as set A.

This may moreover be connected back to Richards’s (2010) proposal that non-distinct elements are unlinearizable:

- Yimas’ strict linear A-B-C clitic order was assumed back in §2.1 to be determined by a linearization algorithm after the application of the morphological rules.

- The language’s adherence to the anti-identity requirement could be driven by linearization considerations: without marking the clitics as morphosyntactically distinct, linear clitic order cannot be established.

\(\text{\text{14}}\)

12 The sole clitic in this example is set C, which does not accord with the present treatment of set C as context-dependent. This suggests that the set C paradigm should be formally divided into two types: clitics cross-referencing alienable possessors of all persons and 1st/2nd person internal arguments are invariably set C, regardless of the surrounding clitic environment. See Yuan (in prep) for details and a concrete proposal.
6.3 Dependent case is dissimilation

Given the extent of the parallelism between the Yimas clitic system and the dependent case system, we should be able to extend our treatment of set A to ABS case.

- Following Kornfilt and Preminger (2015), I propose that NOM/ABS case is the absence of case; ‘NOM’ and ‘ABS’ are thus labels for nominals that do not receive case at all (see also Bittner and Hale (1996)).

- This is in contrast to a subtly different analysis that takes NOM/ABS to be assigned to any argument that does not receive a morphological case (cf. Marantz, 1991).

Independent support for ‘NOM/ABS as caselessness’ (Kornfilt and Preminger, 2015):

- Raised ACC subjects in Sakha are able to control subject agreement on the embedded verb (35), suggesting that the embedded verb is valued prior to A-movement of the subject. However, elsewhere in the language only NOM arguments otherwise may control agreement.

- This suggests that the embedded subject is thus NOM in the embedded clause and ACC once it raises into the matrix clause—but K&P show that a case stacking approach makes incorrect predictions.

- Resolved if NOM is the absence of case: The embedded verb agrees with a caseless nominal, which receives case for the first and only time after A-movement.

(35) *Sakha: Raised ACC subjects control verbal agreement in embedded clause*

\[
\begin{align*}
\text{min } \text{ehigi-ni} & \quad \text{bûgün kyaj-yax-xyt dien } \text{erem-mit-im} \\
\text{I } \text{you-ACC today win-FUT-2PL that hope-PST-1SG} & \\
\text{‘I hoped you would win today.’ (Vinokurova, 2005)}
\end{align*}
\]

→ Both 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 additional morphosyntactic processes.

The preceding discussion casts the nature of the dependent theory of case in a new light.

- It redefines the notion of Marantzian ‘case competition’—nominals are not in competition to receive case; rather, nominals remain caseless unless otherwise required.

- It recharacterizes dependent case as part of a more global pattern, which I refer to as configurationally-determined morphosyntactic differentiation:

(36) *Configurationally-determined morphosyntactic differentiation*

a. Upwards differentiation:
   An element $\alpha$ is realized as $\delta$ if it c-commands an element $\beta$ of the same type within a local syntactic domain.

b. Downwards differentiation:
   An element $\alpha$ is realized as $\delta$ if it is c-commanded by an element $\beta$ of the same type within a local syntactic domain.

c. Intermediate differentiation:
   An element $\alpha$ is realized as $\epsilon$ if it c-commands an element $\beta$ and is c-commanded by an element $\gamma$, both of the same type as $\alpha$.

→ ERG-ABS systems and Yimas make use of (a) and (c); NOM-ACC systems make use of (b) and (c).
7 Conclusion

- I demonstrated that the distributions of dependent morphological case exactly parallel the distributions of morphological paradigms within the clitic system of Yimas. That both systems display the same morphological patterns strongly suggests the existence of some broader linguistic principle that both systems are adherent to.

- I identified this principle as an anti-identity condition, which requires that all elements within some local domain be sufficiently morphosyntactically distinct.

  - Both dependent case assignment and the morphological rules for paradigm sets B and C are dissimilatory responses that take place so that the anti-identity condition is satisfied.

- Dependent case is, under this view, 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.

References


Yuan, Michelle. in prep. Clitic dissimilation and dependent case.
A Clitic-specific dissimilation

A.1 Overview

■ In the appendix, I discuss some peculiar effects that surface on the Yimas clitics in the presence of an overt complementizer on C₀ (recall that I have been depicting C₀ as null up to this point).

■ Yimas complementizers: A small set of word-initial morphemes, discussed extensively by Phillips (1993, 1995) as complementizers occupying C₀.¹³

(37) Yimas complementizers
  a. ka- ‘likelihood’
  b. ant- ‘potential’
  c. ta- ‘negation’
  d. m- ‘relativizer’

■ The complementizers trigger a number of effects on the doubled clitics on C₀.

– Four different effects may surface (39):

(38) Baseline: clitic complex with null complementizer
  pu-ŋa-tay
  3PL.A-1SG.C-see
  ‘They saw me.’ (F196)

(39) Effects triggered by overt complementizers
  a. ka-[mpu]-ŋa-tpu-ŋa
     LIKE-[3PL.B]-1SG.C-hit-PRES
     ‘They are going to hit me.’ (→ B) (F266)
  b. ant-[ŋa]-tput-um
     POT-[3PL]-1SG.C-hit-PERF-PL
     ‘They almost hit me.’ (→ ∅) (F264)
  c. ta-[pu]-wa-t
     NEG-[3]-go-PERF
     ‘He didn’t go.’ (→ impoverished) (F258)
  d. a-[pu]-tmuk-r-um
     POT-[3PL.A]-fall-PERF-PL
     ‘They almost fell down.’ (ant- → a-) (F197)

■ I will argue that all of these effects are also dissimilatory in nature, applying to avoid a Cl⁽A⁻COMP⁾ sequence on C₀. That these effects are dissimilation strategies comes from the fact that they are independently attested as such cross-linguistically.

■ These effects provide further (indirect) evidence for the dissimilatory nature of set B and C in Yimas and dependent case cross-linguistically, because (as seen in (39b)) the realization of set B is one of the effects.

A.2 Complementizer-clitic interactions

■ The choice between one of the four effects attested is (for the most part) idiosyncratic, depending on the choice of complementizer (certain patterns emerge as well, among the idiosyncrasies).

■ Negation (ta-), for example, triggers multiple processes, depending on the feature specifications of the clitics on C₀.

¹³See also Gluckman (2014).
Negation triggers multiple effects

a. ta-[ka]-wa-t
   NEG-1SG.B-go-PERF
   ‘I didn’t go.’ (→ B) (F251)

b. ta-[∅]-mpu-tpul-c-rm
   NEG-2PL.3PL.B-hit-PERF-DL
   ‘They didn’t hit those two.’ (→ ∅) (F255)

c. ta-[pu]-wa-t
   NEG-3PL.go-PERF
   ‘He didn’t go.’ (→ impoverished) (F258)

While a full account of the environments triggering each effect is beyond the scope of this paper, I provide here an analysis of why we see these effects in the first place. In earlier work, Phillips (1993, 1995) treats these effects as a response to a requirement he terms the ‘Yimas EPP,’ which may be satisfied by either a set A clitic or a complementizer. This requirement overrides other rules determining clitic morphology; as a result, every verb has either a set A prefix or a complementizer, but not both.

I adopt the core insight of Phillips’ analysis: A complementizer and a set A clitic are fundamentally ‘the same’ in some sense.

... but also point out some problematic examples: Crucially, a set A form may in principle co-occur with a complementizer, so long as one or the other is morphologically reduced. (I take both directions of reduction to be impoverishment.)

Set A and complementizer co-occurrence requires morphological reduction

a. ta-[pu]-wa-t
   NEG-3PL.go-PERF
   ‘He didn’t go.’ (→ impoverished) (F258)

b. [a]-pu-tmuk-r-um
   POT-3PL.A-fall-PERF-PL
   ‘They almost fell down.’ (ant- → a-) (F197)

Moreover, if a clitic is affected, it is the lowest one on C₀—i.e., C₀’s sister—regardless of its grammatical function. This suggests that the effect is extremely local, operating on structurally adjacent units. A new generalization:

Complementizer-clitic interactions: Given a syntactic constituent consisting of an overt complementizer in C₀ and its sister, a doubled clitic, one or the other must be morphologically altered (a-b).

A key point not noted by Phillips is that all of these effects are cross-linguistically attested as dissimilatory. To capture this, I propose that, just as multiple set A clitics are indistinguishable, so are sequences consisting of a set A clitic and an overt complementizer.

- While it is not clear why the grammar might regard these elements as non-distinct, I take it to be non-coincidental that the particular effects that surface happen to be used dissimilatorily. Some representative examples:
Spanish: Spurious ‘se’ effect derived by impoverishment

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

b. A Pedro, el premio, se lo dieron ayer
‘To Pedro, the prize, they gave it to him yesterday.’ (Nevins, 2007)

Ondarru (Basque): Participant dissimilation resolved by deletion

a. *su-k gu-ri liburu-∅ emo-∅ d-o-ku-su
Intended: ‘You have given us the book.’

b. su-k gu-ri liburu-∅ emo-∅ d-o-su
you-ERG us-DAT book-ABS give-PRF L-PRS.3.SG-CL.E.2.SG
‘You have given us the book.’ (Arregi and Nevins, 2012)

Arregi & Nevins also note that the Zamudio dialect allows the deletion of a 1PL DAT or ERG clitic when a 2nd person clitic of the opposite case (ERG or DAT) is present. This is reminiscent of the fact that either the complementizer or the clitic may be impoverished in Yimas.

A.3 The status of set B

Turning now to the effect yielding set B in the environment of a complementizer, we now find two configurations that result in this effect.

Set B may be effected by an upwards-oriented morphological affecting the higher of two doubled clitics or may be triggered on the sister of an overt C₀ (note that, in the latter case, the clitic and the complementizer symmetrically c-command each other).

That this effect takes place in the presence of a complementizer is important for our broader dissimilation-based story.

We saw above that the realization of set B is one of four different processes that may take place when a complementizer is present.

That the other three processes have been attested across languages as dissimilation strategies suggests that set B realization is also dissimilation-based.

Summary:

- In addition to the morphological rules triggering the set B and C forms, Yimas exhibits a number of other processes applying to the lowest clitic on C₀, when the complementizer in C₀ is filled by overt material.

- These processes include impoverishment and deletion, which are attested as dissimilation strategies cross-linguistically. On that basis, I proposed that these processes should also be viewed as dissimilatory in Yimas as well.

- Crucially, one of these processes is to realize the lowest clitic as set B, thus providing further support for a dissimilation-based treatment of the sets B and C paradigms.