Revisiting the form of negation in Pangasinan

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Abstract   Standard negation in Pangasinan comes in two forms, *ag* and *aga*. Benton's 1971 grammar of Pangasinan describes the *aga* form of negation as occurring specifically with third-singular pivot arguments, which if correct would constitute a typologically unusual instance of marked third-singular morphology. We argue against this characterization and instead propose that *aga* is an allomorph of *ag* historically motivated by a disyllabic word minimum requirement, with some conventionalized restrictions on its distribution. We offer an explanation for its incorrect previous descriptions and discuss similar alternations between monosyllabic and disyllabic allomorphs of negation in other Austronesian languages and consequences for the prosodic status of second-position clitics.

Keywords   Pangasinan, negation, allomorphy, second-position clitics, clitic pronouns, agreement

1   Introduction

In this short paper, we discuss the form of standard negation[1] in Pangasinan, a Southern Cordilleran language (Himes, 1998) of Northern Luzon, the Philippines. As we see in (1), the negator appears as *ag* in some contexts but *aga* in others.[2]

(1) a. **Ag** =ka   man-aayam ed   baleg ya   siudad.
         NEG =2SG.NOM AV-live   OBL big   LNKR city
         'You don't live in a big city.'

     b. **Aga** man-aayam ed   baleg ya   siudad.
         NEG AV-live   OBL big   LNKR city
         'He/she does not live in a big city.'

Benton's 1971 grammar of Pangasinan claims that *aga* as in (1b) reflects the negator *ag* with a third-singular pronoun *a*, which is null except in the context of negation. We see that in the corresponding affirmative sentences in (2), the clitic pronoun *ka* from (1a) is retained in (2a), but there is no segment *a* in (2b) which corresponds to the *aga* in (1b).

(2) a. Man-aayam =ka   ed   baleg ya   siudad.
         AV-live   =2SG.NOM OBL big   LNKR city
         'You live in a big city.'

     b. Man-aayam ed   baleg ya   siudad.
         AV-live   OBL big   LNKR city
         'He/she lives in a big city.'

As an alternative to Benton's description where there is a third-singular pronoun *a* whose realization is linked to negation, we may consider reanalyzing the alternation as agreement on negation: negation appears as *aga* with third-singular pivots but *ag* otherwise. Either of these descriptions would be typologically extremely unusual, for instance as third-singular is cross-linguistically the

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[1] By "standard negation," we refer to the form of clausal negation in verbal predicate clauses, following Payne 1985 and Miestamo 2007, among others.

[2] In addition to abbreviations from the Leipzig glossing conventions, we use: AV, Actor Voice; PV, Patient Voice; CL, clitic; INCH, inchoative; LNKR, linker. For Central Tagbanwa, we additionally abbreviate: NAV, Non-Actor Voice; POT, potential.

least marked in agreement (Harley and Ritter, 2002; Cysouw, 2003; Bakker and Siewierska, 2009; a.o.), which potentially makes this alternation of broader typological and theoretical interest.

Here instead, we will challenge Benton's description of the *ag∼aga* alternation. We propose that *aga* is simply an allomorph of *ag*, rather than a reflection of agreement or a marked pronominal form. In particular, we claim that *aga* historically derived from a process of vowel epenthesis motivated by phonological word size requirements in the language, and that this motivation continues to be reflected in the distribution of these allomorphs. Together with the inventory of second-position clitics in the language, this leads to patterns that could be easily mischaracterized as a negative-sensitive pronominal form or as an unusual form of agreement. We also note similar alternations between monosyllabic and disyllabic negators in other Austronesian languages.

2   Investigating the *aga* negator form

2.1   The *ag ∼ aga* alternation in prior literature

Our discussion of the form of negation in Pangasinan will center around the description of the *ag∼aga* alternation in the Benton 1971b grammar of the language. Benton writes, "The third person topic [pivot] pronoun takes the form *a* following *ag*" (p. 62) and "has no phonological form except when following the negative adverb *ag*" (p. 75).[3] This description is echoed by Rubino (2001) in his short grammar sketch of Pangasinan: "Third person singular topics [pivots] are usually not pronominalized, except after the negative particle *ag-*, in which the pronoun is realized as *-a*" (p. 540).[4] An earlier word list of Pangasinan (Wimbish, 1966) also gives both *ag* and *aga* as forms for negation, but with no description of their distribution.

At the same time, however, it is notable that many other works on Pangasinan only give the *ag* form for standard negation. Only the form *ag* appears in the earlier dictionaries of Cosgaya 1865 and Rayner 1923 and in Fernandez Yaptenco 1967, and only *ag* ever appears in the 1983 Philippine

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[3] Here we refer to page numbers in the 2019 editions of Benton 1971a,b,c, freely distributed online by the University of Hawai'i Press.

[4] Note that we use the term "pivot" for what Benton and Rubino call the "topic": the argument whose choice is cross-referenced by voice morphology on the verb. Furthermore, we describe pivot arguments as exhibiting nominative case and non-pivot agents as exhibiting genitive case.

Bible Society translation of the Bible.[5] Amurrio (1970) leaves an important hint that, perhaps at least for some scholars — including those working at the same time as Wimbish and Benton — the form *aga* was thought to be an error, which may explain its complete absence from the Pangasinan Bible. Amurrio writes, "Children... insert a euphonic *a* between the negative *ag*..." and certain verbs, which he illustrates with "*ag-a-nanengnéng* instead of *ag nanengnéng*; *ag-a-nayari* instead of *ag nayari*." (p. 5). Amurrio thus seems to acknowledge this *aga* form but dismiss it as a child speech error.

From our own elicitation work with seven speakers of Pangasinan, we can report that both forms are used regularly and productively in their speech, and our speakers also express no hesitation towards writing the *aga* form. We therefore choose to take both forms seriously and investigate their distribution, taking Benton's description as our starting point.

2.2 Formalizing Benton's description

Recall Benton's description, echoed by Rubino, which is the only prior description of the distribution of *aga*: "The third person topic [pivot] pronoun takes the form *a* following *ag*" (Benton, 1971b:62). Here we will attempt to formalize this description, starting with the question of what type of pronoun this would be.

Like other Philippine languages (see Reid and Liao 2004, Himmelmann 2005, and especially Kaufman 2010), Pangasinan has an inventory of adverbial and pronominal second-position clitics. In negative clauses, these pronominal and adverbial clitics come between the negator and the verb due to their second-position nature, as in (3). In fact, this is the only material that can appear between negation and the verb.

(3) Ag =ak   =ni   mang-asawa.
     NEG =1SG.NOM =still AV.INCH-spouse
     'I'm not getting married yet.'[6]   (Benton, 1971b:163)

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[5] Editor Dan Kaufman notes that the Pangasinan Bible (Acts 7:48) includes a passage with the same 'live' verb that appears in our examples such as (1) above preceded by the negator *ag*. Our speakers accept this form as grammatical in the context of the Bible, but report that they would prefer to say *aga* for such sentences in speech, in accordance with what we report in (1).

For an *a* pronoun to be the source of the negative form *aga*, it must be a clitic pronoun. We can restate Benton's description by saying that the nominative third-singular clitic pronoun takes the form *a* in negative clauses, but is null otherwise.[7] We formalize this description with the context-sensitive morphological realization rules in (4):

(4) **Description 1, based on Benton 1971b:**

$$pro.\text{CL.3SG.NOM} \leftrightarrow \begin{cases} a & / \text{ in negative clauses} \\ \emptyset & / \text{ otherwise} \end{cases}$$

Similarly, as contextual allomorphy has been argued to be sensitive to linearly adjacent material (see in particular Embick 2010), we might also consider a variant of Description 1 where the pronoun appears as *a* specifically when immediately following negation. We refer to this as Description 1':

(5) **Description 1':**

$$pro.\text{CL.3SG.NOM} \leftrightarrow \begin{cases} a & / \text{ NEG } \underline{\quad} \\ \emptyset & / \text{ otherwise} \end{cases}$$

According to either of Description 1 or 1', a third-singular nominative pronoun encliticized to negation would appear as *a*, explaining the *aga* form of negation in examples such as (1b), repeated here below:

(6) *Aga* **according to Benton's account:**

Ag =a man-aayam ed baleg ya siudad.
NEG =3SG.NOM AV-live OBL big LNKR city

'He/she does not live in a big city.' =(1b)

2.3 *a* is not a clitic pronoun

We now critically evaluate the claim that the negative form *aga* involves a clitic pronoun =*a*. We first provide further information on the distribution of clitic pronouns in Pangasinan, and then show

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[6] The adverb 'still' *ni* takes scope over negation, together inviting translations of the form "not...yet." On the semantic (near) equivalence of "still not" and "not yet" expressions, see for example Krifka 2000.

[7] Pangasinan also has full, non-clitic pronouns, which includes a third-singular form, *sikato*. This form is not dependent on negation.

that the distribution of *a* does not follow that of a clitic pronoun. This leads us to rule out the formalizations of Benton's description in (4) and (5).

As noted above, the only material that can intervene between negation and a verb are adverbial and pronominal clitics. For instance, the nominative second-singular clitic =*ka* encliticizes to the verb in (7), but must follow the negator in (8). In what follows, we use {...} to succinctly indicate acceptable and unacceptable positions for the clitic.

(7) Man-aayam **=ka**   [ed baleg ya   siudad].
     AV-live   =2SG.NOM OBL big   LNKR city
     'You live in a big city.'   =(2a)

(8) Ag {**=ka**}   man-aayam {*****=ka**} [ed baleg ya   siudad].
     NEG =2SG.NOM AV-live   OBL big   LNKR city
     'You do not live in a big city.'   =(1a)

When there is a preverbal adjunct such as a PP, as in (9), clitic pronouns encliticize to the adjunct, although for some speakers this clitic-climbing to adjuncts is optional:

(9) [Ed baleg ya   siudad] {**=ka**}   man-aayam {$^{\%}$**=ka**}.
     OBL big   LNKR city   =2SG.NOM AV-live
     'In a big city, you live.'

When negation and a preverbal adjunct cooccur, the clitic pronoun encliticizes to the adjunct or for some speakers may follow *ag*, but again cannot follow the verb.[8]

(10) [Ed baleg ya   siudad] {**=ka**}   ag {$^{\%}$**=ka**} =ni   man-aayam {*****=ka**}.
      OBL big   LNKR city   =2SG.NOM NEG   =still AV-live
      'In a big city, you still do not live.'

This description of clitic pronoun placement, illustrated in (7–10) with second-singular nominative =*ka*, extends to all other clitic pronouns.

With this background on pronominal clitic position in Pangasinan in place, we reassess Benton's description of *a* in *aga* being a third-singular clitic pronoun. Consider the third-singular variant of

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[8] Here in examples (10–12), we also include the adverbial clitic *ni* following the verb; we discuss a variant of (10) without *ni* in (17) below. Note that examples (9) and (10) are compatible with interpretations where the fronted PP is a topic or focus; that is, these clitic-climbing facts do not depend on a particular interpretation.

example (10), with both a preverbal adjunct and negation. First, (11) shows that a stray *a* cannot encliticize to the preverbal adjunct. This forms an argument against Description 1 in (4) based on Benton's description, where *a* is the form of a clitic pronoun that appears in negative clauses. The ungrammaticality of (11) is however predicted under Description 1' (5) where *a* appears specifically when it immediately follows negation.

(11) * [Ed baleg ya   siudad] **=a** ag   =ni   man-aayam.
         OBL big   LNKR city   =A NEG =still AV-live
         Intended: 'In a big city, he/she still does not live.'

The intended meaning in (11) can instead be expressed by (12) with the negator *aga*.

(12) [Ed baleg ya   siudad] **aga**   =ni   man-aayam.
         OBL big   LNKR city   NEG+A =still AV-live
         'In a big city, he/she still does not live.'

Recall that for some speakers, clitic climbing to a preverbal adjunct is obligatory; see (9–10). For these speakers, the acceptability of the form *aga* in (12) cannot be due to a clitic pronoun realized as *a*: were *a* a clitic pronoun, we should expect it to raise obligatorily to the fronted adjunct, as other clitic pronouns were shown to do. The grammaticality of (12) is thus problematic for any description which attributes the appearance of *a* to a clitic pronoun, and in particular forms an argument for both Description 1 and 1' above.

These comparisons between the distribution of genuine clitic pronouns and the negative form *aga* show that *aga* cannot be analyzed as involving a pronoun exceptionally realized as *a* in the context of negation.

2.4 *Aga* does not track third-singular arguments

Having established that the *aga* negator form cannot be explained as involving an exceptional pronominal clitic form =*a*, we turn to another interpretation of Benton's description. Suppose that the purported link between *aga* and third-singular pivots is correct, although the mechanism involved is not one of a clitic pronoun. A possible alternative would be that the negator *ag* inflects, with *ag-a* being the form that occurs in clauses with third-singular pivots:

(13) **Description 2:**

Negation itself inflects to reflect a 3sg pivot:

$$\text{NEG} \leftrightarrow \begin{cases} ag\text{-}a & \text{/ 3sg pivot} \\ ag & \text{/ otherwise} \end{cases}$$

This analysis treats *-a* as an agreement suffix, which better accords with its very limited placement and distribution (illustrated in the previous section) as compared to a clitic analysis (Zwicky and Pullum, 1983). It echoes the analysis of some head-marking as inflection rather than clitics in other Cordilleran languages (Reid, 2001), although the restriction of this inflection to specifically third-singular arguments — which is cross-linguistically the least marked (Harley and Ritter, 2002; Cysouw, 2003; Bakker and Siewierska, 2009; a.o.) — would make this a typologically unusual form of agreement.

In this section we present evidence that argues against even this inflectional approach to the distribution of the negator *aga*. In brief, we will see that any description that specifically links the appearance of *aga* to a third-singular argument — or, for that matter, any particular type of argument — cannot be entirely correct. The data here also further challenge Benton's original, pronoun-based description as discussed in the preceding sections.

First, we note that *aga* also commonly appears in clauses with non-third-singular pivots. In particular, all of our speakers accept both *ag* and *aga* when followed by the first-singular nominative =*ak* or third-plural nominative =*(i)ra* clitic pronouns, and in fact offer *aga* in first translations in these environments. Naturally occurring examples of this form are also found in Benton's own *Spoken Pangasinan* textbook and the Pangasinan section of the Leipzig Corpus Collection (LCC) (Goldhahn, Eckart, and Quasthoff, 2012), which we have glossed and translated below with the help of our speakers:

(14) *Aga* **with first-singular pivot:**

a. **Ag(a) =ak** b<inm>atik ed parke.
   NEG =1SG.NOM AV.PFV-run OBL park
   'I did not run in the park.'

b. **Aga =ak** =la on-ogip.
   NEG =1SG.NOM =anymore AV.ASP-sleep
   'I will not sleep anymore.' (Benton, 1971c: 283)

c. Ed satan **aga =ak**   =ni na-irap-an.
   OBL this   NEG =1SG.NOM =still AV.ASP-difficult

   'For this reason I will not face hardship.'   (*ibid*: 413[9])

(15) *Aga* **with third-plural pivot:**

a. **Ag(a) =ira**   b<inm>atik ed   parke.
   NEG   =3PL.NOM AV.PFV-run   OBL park

   'They did not run in the park.'[10]

b. **Aga =ra**   man-anisia ed   Trinidad.
   NEG =3PL.NOM AV-believe OBL trinity.
   'They do not believe in the trinity.'   (LCC[11])

Such examples immediately counterexemplify an analysis of *aga* as reflecting agreement with a third-singular pivot argument, as well as the analysis of *aga* involving a third-singular pronoun discussed above.[12]

However, it is not the case that the choice between *ag* and *aga* is completely free. In what follows, we report on the judgments of four speakers with whom we conducted more detailed elicitation. In table 1, we summarize the availability of *aga* where negation is immediately followed by different clitic pronouns[13]; the *ag* form is acceptable in all of these cases for all of our speakers. Two of our

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[9] Additional examples with *aga=ak* are also found on pages 245 and 498 of Benton 1971c.

[10] One of our speakers accepts *ag=ira* and *aga=ra* but rejected *aga=ira*; our other speakers accept all three forms. No speaker accepts *ag=ra*. This gap can be understood if the language generally disallows the cluster [gr], as suggested by the fact that the cluster [gr] appears only in loanwords in Benton 1971a.

[11] From the Pangasinan Wikipedia entry on Jehovah's Witnesses: `https://pag.wikipedia.org/wiki/Tasi_nen_Jehovah`

[12] Benton explicitly discusses just one potential counterexample in his textbook of Pangasinan, where *aga* is inside a relative clause headed by the third-plural pronoun *ra*. Benton (1971c:103) suggests that this is a general property of examples that involve pivot extraction: "Where, as here, the subject of a verb precedes the verb... *agá* is used no matter what 'person' or 'number' the subject may be." However, it is possible that the structure of the relative clause involves movement of a null operator which is formally third-singular (Browning, 1987); if this analysis is correct, such examples would not constitute a counterexample to Benton's generalization that *aga* appears in clauses with third-singular pivots.

[13] Like other Philippine languages (see Erlewine and Levin 2021 and citations there), Pangasinan has two series of clitic pronouns: a nominative series for pivot arguments and a genitive series for non-pivot agents. The latter set is also used for nominal possessors.

speakers only accept the forms marked ✓, while two other speakers also accept the forms marked %; none allow *aga* followed by a singular genitive pronoun.[14] Cases with third-singular pivots — for which there is no nominative clitic pronoun form — are not included here and will be discussed in section 3.1 below.

	nominative		genitive	
1sg	✓	aga =ak	*	aga =ko[†]
2sg	%	aga =ka	*	aga =mo
3sg	—		*	aga =to
1du	%	aga =ta	%	aga =ta
1pl(incl)	%	aga =tayo	%	aga =tayo
1pl(excl)	%	aga =kami	%	aga =mi
2pl	%	aga =kayo	%	aga =yo
3pl	✓	aga =(i)ra	%	aga =da

Table 1: Availability of *aga* by choice of following pronominal clitic

† In Ibaloy (see Ruffolo, 2004:425 ex 13), Kalanguya (see Santiago, 2014:250 ex 20), and Karao (see Brainard, 1994b:307 ex 275), all Southern Cordilleran languages (Himes, 1998) with cognate negators *ag/eg*, the genitive first-singular clitic (expected to be *ko*) is reported to surface as the nominative form *ak* when following negation, resulting in forms such as *ag=gak* or *eg=ak* and neutralizing the pronoun's case distinction. In contrast, in Pangasinan, negation followed by a genitive first-singular clitic pronoun is realized transparently as *ag=ko*.

Second, we return to the discussion of examples with preverbal adjuncts. In the preceding section, we considered clauses with both a preverbal adjunct and negation, with a clitic pronoun encliticized

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[14] A reviewer notes that the pronominal enclitics which allow for the *aga* form for all speakers are those which are vowel-initial — first-singular *ak* and third-plural *(i)ra* — and thus may invite a phonological explanation. We agree that such a generalization is tempting, but also note that there does not appear to be a phonological characterization behind the fact that the singular genitive pronouns *ka/mo/to* consistently do not allow for the *aga* form of negation. We therefore leave this question open at this point.

to the adjunct and an adverbial clitic *ni* 'still' following negation, repeated in (16):

(16) [Ed   baleg ya   siudad] =ka   **ag** =ni man-aayam.
       OBL big   LNKR city   =2SG.NOM NEG =still AV-live
       'In a big city, you still do not live.'   =(10)

Now consider example (17) below, which is a variant of (16) without *ni* and therefore with no material intervening between negation and the verb. All of our speakers accept *aga* in this position and strongly disprefer *ag*:

(17) [Ed   baleg ya   siudad] =ka   {***ag** / ✓**aga**} man-aayam.
       OBL big   LNKR city   =2SG.NOM   NEG   AV-live
       'In a big city, you did not live.'

The same behavior is observed in example (18). In this case, the genitive first-singular pronoun *ko* climbs to the fronted adjunct, leaving no material between negation and the verb, and negation again appears as *aga*:

(18) [Ed   baleg ya   siudad] **=ko**   {***ag** / ✓**aga**} a-nengneng may too.
       OBL big   LNKR city   =1SG.GEN   NEG   PV-see   DEM man
       'In a big city, I did not see a man.'

Recall that only some of our speakers accept the *aga* negator form when followed by the second-singular nominative clitic pronoun =*ka* (%*aga*=*ka*) and none of our speakers accept *aga* followed by the first-singular genitive clitic pronoun =*ko* (**aga*=*ko*); see table 1. And yet, the *aga* form appears in examples (17) and (18). This suggests that the *aga* form in these examples is not due to being licensed by any particular type of argument, even though adjacent pronouns do appear to be considered, resulting in the pattern in table 1.

Interactions such as that in (16–18) hint towards a more general preference for the *aga* form to appear in environments where negation would otherwise stand alone as a monosyllabic word. We suggest in the following section that *aga* is an allomorph of *ag*, whose development and distribution is informed by such phonological pressures, as well as its apparent link to third-singular pivots hypothesized by Benton.

3 *Aga* is an allomorph of *ag*

We propose that *aga* is an allomorph of *ag* whose distribution is phonologically motivated but somewhat conventionalized. We show that Pangasinan has a disyllabic minimum size requirement on phonological words — which we describe and motivate in detail below — which the basic form of the negator *ag* has the potential to violate. Vowel epenthesis is one way that the size requirement can be satisfied, historically resulting in the surface form *aga*. Over time, with sufficient tokens of *aga* in learner input, *aga* has come to have the status of an allomorph of *ag*. The *aga* allomorph occurs with different frequency in different environments, in a manner partially explained by its original motivation as a response to the size requirement, although its precise distribution also varies by speaker, as we have seen above.

3.1 The third-singular connection

Our understanding of *aga* offers an explanation for how *aga* may have been misanalyzed by Benton as involving a third-singular pronoun or inflection. The basic idea is as follows: the appearance of the *aga* allomorph may indeed be particularly common in the presence of a third-singular pivot argument, due to an interaction between the inventory of second position clitic pronouns in the language (see table 2), their positioning, and the aforementioned minimal size requirement.[15]

	nominative	genitive
1sg	ak	ko
2sg	ka	mo
3sg	—	to
1du	(i)ta	ta
1pl(incl)	(i)tayo	tayo
1pl(excl)	kami	mi
2pl	kayo	yo
3pl	(i)ra	da

Table 2: Pangasinan clitic pronouns, based on Fernandez Yaptenco 1967:67, Benton 1971b:225, Rubino 2001:540

Clauses in Pangasinan with non-third-singular pivots generally can, and very often do, involve a second-position clitic pronoun. This is the case with first or second person pivots, which are likely to be expressed by clitic pronouns rather than full pronouns, except where they are contrastive (see e.g. Cardinaletti and Starke 1999). A clitic pronoun is also possible in sentences with third-plural full noun phrase pivots, due to a process which Benton (1971b) calls "apposition," whereby a demonstrative-marked phrase is used to describe the referent of a corresponding clitic pronoun, as in (19).

(19) Nan-puniti =ra$_i$ na   laki ira-may bie$_i$.
      AV-hit   =3PL.NOM GEN man PL-DEM woman
      'The women hit a man.'

The end result is that, with a non-third-singular pivot, it is highly likely that the sentence will have a second-position clitic pronoun. In a negative sentence, this enclitic with the negator *ag* can form a word of at least disyllabic size.

In contrast, consider a clause with a third-singular pivot and no adverbial clitic. Notice that the inventory of clitic pronouns in Pangasinan (table 2) has a gap: there is no third-singular nominative pronoun. If the clause has a negator, there would be no enclitic available to make it satisfy a disyllabic minimum word size requirement as *ag*, and thus the disyllabic *aga* form will be strongly favored specifically in this context.

(20) **/Ag/** → [aga] man-aayam ed   baleg ya   siudad.
      NEG   AV-live   OBL big   LNKR city
      'He/she does not live in a big city.'

What we see is that the system of second-position pronominal clitics in the language — itself with a typologically common and otherwise rather unremarkable third-singular gap in the paradigm — and a disyllabic word requirement together conspire to motivate a marked allomorph, *aga*, to overwhelmingly cooccur specifically with third-singular pivot arguments. We believe this is the reason why Benton described the *aga* form as specifically being linked to third-singular arguments.

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[15] Our speakers (in their 20's to 40's) do not command the *ita* and *itayo* pronominal forms, but recognize them as used by older speakers. We therefore only report on the use of *ta* and *tayo* in Table 1. On the interaction of the *ra* vs *ira* third-plural forms and the form of negation, see footnote 10.

Although we have shown above that a characterization of *aga* as expressing third-singular agreement appears to be incorrect for the synchronic grammar of Pangasinan, an interesting possibility is that this pattern in the language may have the potential to grammaticalize into a system closer to Benton's description. Just as linguists encounter language data without their underlying rules and then analyze them, children who acquire a language must also formulate their own analyses of target language patterns in the process of language acquisition. Through this (re)analysis process, children sometimes acquire grammars that are different from those which produced their input. This has been argued to be a significant source of diachronic change; see for example Cournane 2017 and references therein.

This case study of Pangasinan thus illustrates an interesting situation where a typologically mundane pronominal or inflectional inventory — where third-singular arguments are the least marked (Harley and Ritter, 2002; Cysouw, 2003; Bakker and Siewierska, 2009; a.o.) — could grammaticalize over time into a typologically extremely rare pattern, where third-singular arguments are exceptionally marked.

In the remainder of the paper, we argue for the plausibility of *aga* being a response to a minimum word size requirement in Pangasinan and the nature of this requirement, and also highlight similar alternations between monosyllabic and disyllabic negators in other Austronesian languages of the Philippines and Taiwan.

3.2 *Aga* and the disyllabic minimum size requirement

Many languages of the world observe a disyllabic or bimoraic minimum size requirement on wordhood; see for example Prince 1980; McCarthy and Prince 1986; Kager 1989 and Hayes 1995; among others. In Austronesian languages, Blust (2013) writes that "lexical bases in most AN languages are predominantly disyllabic" (p. 234) — a tendency that has been claimed to go back to Proto-Austronesian roots (Chrétien, 1965) — with corresponding minimum size requirements on prosodic words as well. Himmelmann and Kaufman 2020 also refers to a disyllabic or bimoraic minimum size for lexical roots in Philippine languages. See also Smith 2021 for further discussion as well as a formal analysis of such effects motivated by a general Binary Foot (Ft-Bin) constraint.

Such a disyllabic target preference also holds of Pangasinan. When we consider the Pangasinan

lexicon, although various functional elements such as articles/case markers, prepositions, and clitic pronouns are monosyllabic, roots are overwhelmingly disyllabic.[16] This is already noted in Amurrio (1970): "The basic element of the Pangasinan word is the stem or root-word. This consists of two syllables..." (p. 7), noting just two potential exceptions: "*La*, r.w. [root word] of to go, rather seems to be the adv. [adverb] *la* (already) conjugated.[17] *kan*, r.w. [root word] of to eat, is most probably a syncopation of *kaan*" (p. 8 note 1). Benton's Pangasinan dictionary (Benton, 1971a) includes only four potentially monosyllabic nominal roots: *kiew* 'tree', *poeg* 'knee', *kien* 'someone', and *yo* 'ray'. For our speakers, *kiew*, *poeg*, and *kien* indeed seem to be produced as monosyllables with diphthongs. *Yo* was not recognized with the intended meaning as 'ray.'

We propose that the *aga* allomorph of negation historically derived from a process of *a* vowel epenthesis motivated by this strong disyllabic minimum size requirement on phonological words. As discussed by Blust (1991, 2013 ch. 9, 2017), such minimum size requirements and other requirements on word shape have led many Austronesian languages to apply processes of vowel epenthesis. Evidence for *ag* being the earlier, basic form of the negator — as opposed to *aga* which then undergoes contraction under certain circumstances — comes from the fact that other Southern Cordilleran languages have negators of the form *ag* (Kalanguya, see Santiago 2014:250 ex 20; Keley-i Kallahan, see Hohulin 1972; Hohulin and Hohulin 2018) or *eg* (Karao, see Brainard 1994b:307 ex 275; Ibaloy, see Ruffolo 2004:422–425; Ilongot, see Rosaldo 1980:237), but not *aga* or similar.[18]

In contexts where there is no material intervening between the negator *ag* and the verb, there are two ways to satisfy such a requirement: to strengthen the negator to *aga* via vowel epenthesis or to have *ag* form a word with the following verb. The latter strategy is also attested in Pangasinan.

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[16] The same has been observed of other languages of the Southern Cordilleran group (Himes, 1998). Ruffolo (2004:69) notes that most roots in Ibaloy are disyllabic and gives only two examples of monosyllabic roots — *law* 'go' and *kan* 'eat' (p. 13) — but does not note whether this list is exhaustive. Brainard (1994a:80) and Hohulin and Kenstowicz (1979:244) note that most roots are disyllabic in Karao and Keley-i, respectively, but without discussions of exceptions. See also Reid 2020 for a similar note on Central Bontok (Central Cordilleran).

[17] Santiago (2015) however proposes the opposite, that the adverb *la* developed historically from the verb 'go.'

[18] Hohulin and Hohulin (2018:68) give both *ag* and *eleg* as forms of standard negation in Keley-i, with a note (their footnote 45) that the shorter form *ag* is most common when cooccurring with a pronoun. This brief note suggests an alternation similar to that between *ag* and *aga* here, although further empirical work would be necessary before drawing conclusions for Keley-i.

Benton (1971b) writes, "The negative adverb *ag* is usually phonologically a part of the word which follows it, although it is also often written separately" (p. 62). In some cases, Benton writes such forms as single words, such as *ag-anta* 'not-know' and *ag-nayari* 'not-possible,' but *ag(a)* is frequently written as a separate word from an immediately following verb, not only by Benton, but also in other texts and by our speakers. It is unclear to what extent *ag* consistently does form a word with the following verb when no material intervenes, but this too supports the idea that *ag* prefers not to stand alone as a monosyllabic word.[19]

A potential challenge for this view is that *a* vowel epenthesis does not seem to be a synchronically productive process in the language, except perhaps for children, as Amurrio 1970 suggests. However, repairs of this form in response to a disyllabicity requirement are already attested in Austronesian languages, as described by Blust (1991): "an otherwise inoperative vowel epenthesis (with schwa or /a/) sometimes takes place to restore the disyllable" (p. 142). Given that the distribution of *ag* versus *aga* appears to be somewhat conventionalized — as described earlier; see e.g. table 1 — it appears that *aga* is best analyzed as a disyllabic allomorph of *ag*, rather than the product of a productive vowel epenthesis process in the synchronic phonology.

3.3   Determinants of allomorph selection

The analysis developed here is one where *ag* and *aga* are allomorphs, arising from a historical process of epenthesis to satisfy a size requirement. Synchronically, however, it appears that negation is the target for cliticization in the syntax, with the domain for allomorph selection being the complex head thus created. We note that, to the best of our knowledge, the choice of *ag* vs *aga* allomorph is never sensitive to the presence or absence or shape of material that *precedes* the negator.[20] This

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[19] Ruffolo (2004) explicitly describes the cognate negative morpheme *eg* in Ibaloy as a proclitic, and consistently writes *eg* as a single word with the following verb when no clitics intervene. See especially her pages 422–425.

It is however worth noting that orthographic conventions of a language do not offer a definitive indication of phonological wordhood. A similar situation — where monosyllabic elements are phonologically dependent on the words which follow them, but conventionally represented orthographically as separate words — is also found in a number of Bantu languages. See for example Zerbian 2012 on Tswana.

[20] Dan Kaufman (p.c.) notes that monosyllabic variants of functional words in Tagalog appear to obey a similar constraint: the short forms of the negator (*di*, from *hindi*) and 'why' (*bat*, from *bakit*) must always be followed by some material, and therefore may never be final in an utterance, and are insensitive to the presence or absence of preceding material.

would follow straightforwardly from the approach sketched here: elements preceding the negator would not be part of the complex head in question, and thus could not be a factor in determining the form of negation, assuming that no other process could apply to make such elements part of the relevant complex head. This section discusses some evidence supporting the view that the selection of allomorphs generally takes place after the placement of clitics is determined, which is broadly compatible with a realizational approach to morphology such as in Distributed Morphology (Halle and Marantz, 1993, 1994; Embick and Noyer, 2001; Embick, 2010; a.m.o.).

In section 2.4, we showed that the realization of the negator as *ag* vs *aga* may depend on the choice of the immediately following pronominal clitic. For instance, the negator followed by the first-singular nominative clitic pronoun may be realized together as *ag=ak* or *aga=ak*; in contrast, the negator followed by the first-singular genitive pronoun must appear as *ag=ko*, not **aga=ko*. (See Table 1.) Interestingly, when negation is immediately followed by an adverbial clitic, the choice of negative allomorph does not appear to be sensitive to the choice of clitic. In all such cases, our speakers accept both the *ag* and *aga* forms, as seen in (21). We have also verified the same with the adverbial clitics *la* 'already,' *lamet* 'again,' *labat* 'only,' and *talaga* 'really.'

(21)   Ag(a) {=ni / =met} angan si   Pedro.
        NEG   =still =also AV.eat NOM Pedro
        'Pedro still/also has not eaten.'

This would suggest that, although both display a similar second-position distribution, there is a distinction between adverbial clitics and pronominal clitics. One way to think of these facts would be one of optionality in position: adverbial clitics are optionally included in the domain that determines allomorphy of negation while pronominal clitics are obligatorily included. Such distinctions are not unheard of in other Philippine languages. Richards 2003 for instance argues that adverbial clitics in Tagalog occupy a syntactically distinct position from pronominal clitics based on certain facts involving ellipsis, with the second-position distribution of clitics in the language subsequently resulting from a process of lowering.

This sort of approach could be leveraged to account for the Pangasinan facts discussed here, sketched below, based on a proposal from Embick and Noyer (2001) that the same process of lowering may take place at different stages of the derivation.[21] Pronominal clitics would always lower

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[21] See also Selkirk 1995, Booij 1996, Peperkamp 1997, and Ito and Mester 2009 for complementary observations that

to negation prior to allomorph selection, with the result being that they will always create a context that could allow *ag* to surface, depending on the pronoun in question. Adverbial clitics, in contrast, could lower to negation prior to allomorph selection (in which case *ag* would surface), or after (in which case *aga* would surface). A question would then remain as to whether pronominal clitics which allow either form of negation to surface display the same optionality in the timing of lowering that adverbial clitics do, or whether they consistently lower to negation prior to allomorph selection, with optionality arising from some other factor.

An alternative approach would be one in which pronominal clitics and adverbial clitics consistently appear in the domain relevant for allomorph selection, but where the choice of allomorph is determined by a contextually sensitive property of the clitic that has adjoined to negation, rather than a contextually sensitive property of negation itself. Much work (Inkelas, 1989; Zec and Inkelas, 1990; Zec, 2005; Tyler, 2019; a.o.) suggests that one factor in allomorph selection is *prosodic subcategorization*: certain elements may impose prosodic shape requirements on other elements local to them. On this approach, pronominal clitics like =*ko*, which require the short form *ag* to surface, prefer to prosodically subcategorize for a single syllable, to their left. Pronominal clitics like =*ak*, and adverbial clitics more generally would not prosodically subcategorize, and thus allow either *ag* or *aga* to surface. Given that these subcategorization frames are generally taken to be violable, we expect that their effect should be observable just in cases where the element they attach to has a monosyllabic allomorph; both sorts of clitics would in principle be able to attach to a polysyllabic verb.

3.4   Similar alternations between monosyllabic and disyllabic negators

A similar alternation in negator form is reported in Central Tagbanwa of Palawan. Standard negation appears to have two forms, *da* and *data*. Scebold (2003:81) gives *data* as the basic form and describes *da-* forms as contractions of *data* with a following morpheme.[22] The combinations of this form attested in Scebold 2003 are given in table 3. As Scebold himself notes (p. 81 footnote

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clitics may attach to phonological words with differing levels of coherence, corresponding to distinct prosodic representations. An intriguing possibility — which we leave to future work — is that the stage of the derivation that Embick's lowering takes place corresponds to the level of representation discussed by the authors above.

[22] This description is echoed by Blust (2013:481).

4), other *da-* forms may also exist but were simply absent in his data.

dana	<	NEG =*na* (anymore)
dako	<	NEG =*ako* (1SG.NOM)
dako	<	NEG =*ko* (1SG.GEN)[†]
daka	<	NEG =*ka* (2SG.NOM)
dakita	<	NEG =*kita* (1PL(INCL).NOM)
dakami	<	NEG =*kami* (1PL(EXCL).NOM)
dakamɨn	<	NEG =*kamɨn* (1PL(EXCL).GEN)

Table 3: *Da* negative forms in Central Tagbanwa attested in Scebold 2003

† Scebold (2003) only describes *dako* as underlyingly involving a nominative first-singular pronoun, *ako*. However, example (278) on page 85, reproduced here as (22), shows that *dako* also surfaces for first-singular non-pivot agents.

Notice that all of the morphemes that "contract" with negation are second-position clitics. Furthermore, when two such morphemes cooccur with negation, they appear in the same order as would be independently expected. For instance, negation and the adverb 'anymore' *na* are written by Scebold as separate words in (22), even though they occur elsewhere together as *dana*. The difference here is that there is also a pronoun, which Scebold writes together as *dako*. This placement is predicted if *ko* and *na* are both second-position clitics, as pronominal clitics generally precede adverbial clitics.

(22) Dako   na   makitan   ya   tanɨ.
      NEG-1SG.GEN anymore NAV.POT.see NOM ground
      'I couldn't see the ground anymore.'   (Scebold, 2003:85)

The distribution of negator forms in Central Tagbanwa then invites an analysis parallel to that which we have developed here for the Pangasinan *ag~aga* alternation: *da* and *data* are simply allomorphs of the negator, with *da* occurring when it can form a phonological word with an immediately following clitic. We would suggest *da =ko =na* as an appropriate parse of (22), with *da* simply being the monosyllabic allomorph of negation, rather than the result of contraction. Alex Smith (p.c.) furthermore suggests that *data* may in fact be the result of a lengthening repair to *da*, as

t is a cross-linguistically common choice for consonant epenthesis due to coronals being a highly unmarked place of articulation (see e.g. Kager, 1999:125).

Similarly, Jiang and Billings (2014) describe an alternation in the form of the negation in Rikavung Puyuma consistent with the analysis of Pangasinan negation we have discussed here. Negation takes two forms in the language: either *ħazi̪* or *ħa*. In many cases, the two forms appear to be in free variation. However, there are two cases where a particular allomorph is required. First, when no clitic follows, the disyllabic form must be used:

(23)   {✓ħazi̪ / *ħa} s<əm>ənaj i   Misak.
      NEG   <INTR>sing ABS Misak
     'Misak didn't sing.'   (Jiang and Billings, 2014:133)

The second case is perhaps more striking. The second person singular pronoun comes in two forms, =*nu* and =*u*. In this case, the form of negation and the form of the clitic are complementary: the long form of negation must be used with the short form of the clitic, while the short form of negation must be used with the long form of the clitic, as shown below.

(24)   a.   {✓ħazi̪ / *ħa} =u   sukun-an?
        NEG   =2sg push-TR

    b.   {*ħazi̪ / ✓ħa} =nu   sukun-an?
        NEG   =2sg push-TR
     'Didn't you push them?'   (*ibid.*: 133)

Cauquelin (1991:27) notes that *au* sequences may be reanalyzed as dipthongs in fast speech. This suggests that the monosyllabic allomorph in (24a) would be reinterpreted as *ħa=u > ħaw*, which violates the disyllabicity requirement.[23] Such a monosyllabic parse is not possible with the intervening consonant in (24b). This interaction, together with a preference for the monosyllabic allomorph, explains the obligatory use of the disyllabic form in (24a) but the monosyllabic form in (24b).

The facts in both Central Tagbanwa and Rikavung Puyuma lend themselves to analyses along the lines of that discussed here for Pangasinan. The choice of allomorph for negation is determined by a need to satisfy a disyllabicity requirement. In cases where a following clitic cannot satisfy

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[23] Macaulay (2021:601ff) furthermore shows that the dipthong *aw* is treated as monomoraic in Puyuma, so this form would also violate a bimoraic minimum requirement.

this role — either because one is not present, or because the clitic would not be parsed as its own syllable — the disyllabic form of negation is obligatory. Such interactions in other Austronesian languages in turn lends further support to the plausibility of our analysis for Pangasinan.

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