THE PLURACTIONAL MARKER *-PÖDÏ* OF AKAWAIO (CARIBAN) AND BEYOND[1]

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The aim of this paper is to give a comprehensive description of the suffix *-pödï* of Akawaio (Cariban, Venezuelan). In particular, we aim to investigate the functions that this marker can express and the grammatical status that it has in the grammar of Akawaio. This is a challenge because *-pödï* shows broad multifunctionality that has not yet been fully explored. A review of the typological phenomenon of pluractionality suggests that all the functions of this suffix can be captured within the pluractional conceptual space. In addition to mapping the functions of *-pödï* into the pluractional space, we also identify additional morphology that explains the absence of *-pödï* in the other typical pluractional functions. Finally, we give an overview of pluractional markers in other Cariban languages, with particular reference to Kari'nja.

1. Introduction. Akawaio (ISO code 693-3: ake) is a variety of the Cariban language Kapóng spoken by some 6,000 people in Guyana and Venezuela (Caesar-Fox 2003:50). From a genetic point of view, Akawaio belongs to the Pemón Group of the Cariban family, which is generally considered to be part of the Venezuelan Branch (Gildea 2012; Matter 2021:43). However, a precise and reliable genetic classification of the Cariban family does not exist (Matter 2021:47–54), mainly because of the lack of structured lexical documentation for the family and because a tree diagram of the family is confounded by the history of extensive contact between individual languages belonging to different genetic (sub-)branches (Gildea 1998:ch. 1; Matter 2021; for a detailed description of some aspects of more recent Akawaio contact, see Butt-Colson 1973, 1983; Caesar-Fox 2003:ch. 2).

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The aim of this paper is to give a comprehensive description of the derivational morpheme *-pödï* 'PLURACTIONAL' in Akawaio, exhaustively categorizing textual instantiations of the morpheme via the pluractional semantic map developed in Mattiola (2019). This suffix is quite multifunctional, covering functions that generally are described as belonging to different grammatical categories such as aspect, actionality, and nominal number. In addition, we offer a comparative description of the distribution of the cognate suffix in related languages, including a deeper look at the cognate morpheme of Kari'nja (ISO code 693-3: car), followed by a historical interpretation of the differences between their functional profiles.

The corpus of data for this particular paper comes from the documentary work of Desrey Caesar-Fox, who collected recordings in 1999 and 2001 with many speakers in her home village of Waramadong, in the Upper Mazaruni District in Region 7 (Cuyuni-Mazaruni) of Guyana. She transcribed, translated, and (in collaboration with Gildea) glossed a collection of texts of various genres, amounting to 10,799 words. This corpus was the basis of her PhD thesis on anthropological aspects of Akawaio speech genres and sociolinguistic variation found in Waramadong. The thesis was defended at Rice University, with a selection of these texts given in appendix B (Caesar-Fox 2003:302–582). This appendix is composed of twenty-seven texts belonging to different genres: traditional stories (12), personal narratives (5), Tareng healing chants (6), and traditional praising rhymes for children (4).

Between 1998 and Caesar-Fox's 2006 election to the Parliament of Guyana, Caesar-Fox and Gildea laid much of the empirical foundation for a reference grammar of Akawaio. However, this project was cut off upon Caesar-Fox's 2009 death in an auto accident. Although all the examples we present in this paper come from Caesar-Fox's dissertation, in our presentation of these examples, we sometimes modify the morphological parsing of the dissertation version, explicitly inserting placeholders for several zero morphemes such as Ø- '1', Ø- '3', and -Ø 'PRESENT'. In addition, we gloss *-pödï* as PLAC (i.e., *pluractional*), which is consistent with the analysis we offer in the body of this paper. Similarly, Caesar-Fox generally provides extremely "free" translations, allowing the English version to flow better independently of the Akawaio version. This means that at times the free translation of any given example does not make it easy to identify the specific functions served by specific morphemes embedded in that example. For some examples presented here, Gildea adds a more literal translation based on his own understanding of the grammar and the context, developed over his years of collaboration with Caesar-Fox and his years working with the database since her untimely demise.

Like most Cariban languages, Akawaio is morphologically agglutinative, with verbs typically bearing from two to seven affixes and nouns from zero to three. However, Akawaio seems to be turning some synthetic operations with

analytical ones. In terms of lexical classes, the distinction between roots and words is important:

> For roots, clear open classes are nouns and verbs, with moderate-sized (probably-closed) classes of adverbs, postpositions, sound-symbolic words, and particles; for words, extremely productive category-changing derivational morphology shifts roots from one category to another, effectively making adverbs an open class and roots with adjectival meanings are split between abstract nouns (size, weight, texture) and adverbs (color, etc.). (Gildea and Caesar-Fox 2006:3)

Verbs can be either transitive or intransitive, but labile, ambitransitive, and syntactically trivalent roots/stems are not attested. However, Gildea and Caesar-Fox (2006:3) note that "[v]alence may be adjusted morphologically by means of a detransitivizing prefix and a transitivizing suffix."

Among the derivational affixes of Akawaio, we can identify the presence of *-pödï*. This suffix is generally glossed as ITERATIVE or HABITUAL in Caesar-Fox (2003). This is because *-pödï* expresses functions related to the domain of the plurality of events (1) and participants (2).[2]

(1) ewaik, abïne pöröu damo'ka**bö'**nöbök mang kajibe tok a ingu'tö[3]

ewaik	abïne	pöröu	damo'ka–**bödï**–nöbök	mang	kaji–be
yes	wait	arrow	fall–**PLAC**–PROG	3:be:PRS	lie–ATTR

tok	ya	ingu'tö–Ø
3PL	ERG	fool–PRS

'"Okay/yes, wait the arrows **keep falling down**," they said to fool her.' (lit. 'are multiply falling down') (RA Piyai'ma Story 044 <145.790>)

[2] The abbreviations used in this paper are as follows: 1 = 1st person; 1+3 = 1st exclusive; 2 = 2nd person; 3 = 3rd person; ? = unknown marker; A = subject of transitive verb; ABS = absolutive; ADV = adverbializer; ADDITIVE = additive; AFF = affirmative; AGT = agent; A.I. = addressee involvement; ANIM = animate; AN.INVIS = animate demonstrative pronoun invisible/distal singular; ATBZ = attributilizer (adverbializer); ATTR = attributive; CAUS = causative; COLL = collective; COMPL = completive; COP = copula; CRTN = certain; DETR = detransitivizer; DI = dependent initial; DIM = diminutive; ERG = ergative; EM = emphatic particle; FUT(2) = future (type 2); HES = hesitation; HSY = hearsay; IMP = imperative; IMP.MVMT = imperative movement; IN.INVIS = inanimate demonstrative pronoun distal invisible; INSTR = instrumental; INT = intensive; IPFV = imperfective; ITER = iterative; LOC = locative; MED.PST = medial past; NEG = negative; NPST = non-past; NMLZ/NZR = nominalizer; O/OBJ = object; P = subject of intransitive verb; PF = perfect; PL = plural; PLAC(1/2) = pluractional (1 or 2); PM = pluractional marker; PPERF2 = intermediate past-perfective; PRO = pronoun; PROG = progressive; PRS = present; PSD = possessed; PSR = possessor; PST = past; PTCP/PRTCPL = participial; REC.PST = recent past; RED1/4/5 = reduplication (type 1/type 4/type 5); REL = relativizer; RFL = reflexive; RM.PST = remote past; S_A = agent-like subject; SAP = Speech Act Participant; SBJ = subject; S_O = object-like subject; STYLE = stylistic; T = target; TR = transitive marker; V = verb; VBZ = verbalizer; WRT = with reference to (oblique).

[3] Akawaio orthography uses the IPA except for these symbols: *'* [ʔ], *ï* [ɨ], *ö* [ʌ], *j* [dʒ], *ng* [ŋ], *r* [ɾ], and *y* [j].

(2) tïno'pïge tok ena**bö'**ka'sak
t–no'pï–ge tok ena–**bödï**–gabï–zak
ADV–wife–PSD 3PL become–**PLAC**–COMPL–PF
'They **individually are** already with wives.' (lit. 'they have multiply become with wives') (PS. Personal Narrative 034 <129.654>)

This suffix is quite a productive morphological device. It is widely used and can also serve to form part of the base for further derivations, as in nominalizations (e.g., the first use in [3], where the verb root *egama* 'tell' bears the pluractional suffix and the participant nominalizer *-ning* 'A nominalizer', yielding a word meaning 'an iterative/habitual teller').

(3) pandong, pandong sa'ji egama**bök**ning kuru mararö kuru mïgï ne'**pö'**tai, waga ning
pandong pandong sa'ne ji egama–**bödï**–ning kuru
story story EM EM tell–**PLAC**–A.NZR EM
mararö kuru mïgï n–eji–**bödï**–tai waga ning
little.bit EM HES 3–be–**PLAC**–MED.PST Waga EM
'There was one Waga who used to tell a bit of stories.' (lit. 'used to be [an iterative/habitual teller] of stories') (RA Eagle Story 003 <11.837>)

There are at least six allomorphs of this marker: *-pödï/-bödï* (1) and the contracted forms *-pö'/-bö'* (2–3) and *-pök/-bök* (3). Variation in voicing of the initial stop is conditioned by the preceding segment (voiced when preceded by a vowel or nasal, voiceless when preceded by a glottal stop), and reduction of the final syllable is conditioned when followed by a suffix that begins with a single consonant (typically the final syllable reduces to a glottal stop, with the velar stop a sociolinguistic variant).

At the functional level, we have already noted that the suffix *-pödï* can express functions related to event plurality and plurality of the participants involved. As we will show in the remainder of this paper, these functions are best analyzed as manifestations of a phenomenon known as **pluractionality**.

The remainder of this paper is organized as follows: In **2** we define pluractionality as it is conceived in recent typologically oriented research, and in **3** we describe our methods and some issues connected to them. In **4** we provide a detailed description and categorization of all occurrences of *-pödï* found in the corpus. In **5** we fit our analysis of the functional domains of *-pödï* into the general theory of pluractional functions, plotting the semantic map of *-pödï* against the typological conceptual space of pluractional markers (Mattiola 2019). In **6** we briefly survey the functional domain of *-pödï* cognates in other Cariban languages, exploring in a bit more depth the functions of the cognate morpheme in Kari'nja. Then we offer a historical hypothesis that might explain differences in functional profile between these cognate morphemes (**7**).

2. Pluractionality in cross-linguistic perspective. Pluractionality is a phenomenon that is generally defined as any morphological strategy expressing plurality of events. In recent years, the number of studies specifically dedicated to pluractionality has increased substantially, in particular, language-specific investigations (e.g., Garrett 2001; Haji-Abdolhosseini, Massam, and Oda 2002; Yu 2003; Van Geenhoven 2004; Rose 2007; Bar-el 2008; Součková 2011; among others) and theoretical semantic investigations (e.g., Cusic 1981; Lasersohn 1995; Van Geenhoven 2005; among others). This phenomenon has also captured the attention of typologists (e.g., Dressler 1968; Corbett 2000; Wood 2007; Mattiola 2019). In what follows, we briefly present the notions relevant for our research based on the most recent typological work—that is, Mattiola (2019), which is the first large-scale typological investigation of pluractionality (based on a 246-language sample), and it develops and refines some ideas already proposed by previous works according to evidence taken from a large cross-linguistic empirical database.

The author defines pluractionality as follows (Mattiola 2019:164):

> Pluractionality is defined by a morphological modification of the verb (or a pair of semantically related verbs) that primarily conveys a plurality of situations that involves a repetition through time, space and/or participants.

PMs cover a broad range of different functions. Based on their semantic closeness to the cross-linguistic definition and on their typological frequency, Mattiola (2019) classifies these functions into *core functions* and *additional functions*. The four *core functions* listed in (4) are the most frequent and as such are the primary criteria used in the identification of pluractionality.

(4) Core functions of PMs based on Mattiola (2019:23–26)

i. ITERATIVE: multiple repetitions occurring on a single occasion sequentially;
ii. FREQUENTATIVE: multiple repetitions occurring on different occasions and thus not strictly sequential;
iii. SPATIAL DISTRIBUTIVE: repeated situations spread over different places
iv. PARTICIPANT PLURALITY: repeated situations involving or spread over a plurality of participants

A PM always expresses a plurality of situations, but the core functions differ from each other according to which element of the occasion is directly involved by this plurality, that is, the single repetitions can be distributed over time, space, and/or participants.[4] It thus follows that when we talk about

[4] These elements are defined as "a specific time frame in which a situation (i.e., a state or an event) occurs in a (specific) place and eventually involving also one/some participant(s)" (Mattiola 2019:20, see also Lyons 1977:483).

participant plurality, we refer to an occasion in which there are several occurrences of an action affecting more than one participant (otherwise we would talk about nominal number), and when we talk about *spatial distributivity*, we have different events taking place in different locations. Of course, these elements can be involved at the same time by situational plurality (an action involving several participants in different locations is not infrequent at all), but by analyzing the event construal of the occasion, we can quite easily identify which is the most prominent element involved (cf. **3**).

The eight *additional functions* listed in (5) are less frequent, and while they arguably show some semantic relationship with the notion of event plurality, they are not part of the criteria by which pluractionality is defined.

(5) Additional functions of PMs based on Mattiola (2019:32–39)

i. Event-Internal Plural: a situation not repeated but that is composed of different repetitive sub-situations that is not repeated;
ii. Continuative: a situation prolonged through time (extended and not repeated);
iii. Habitual: a situation repeated customarily conceived as typical of a time frame;
iv. Generic Imperfective: a situation occurring always (e.g., a property or a quality of an entity or a gnomic truth);
v. Intensive: a situation performed with more effort than the normal happening of the same situation;
vi. Complete: a situation performed in its entirety;
vii. Emphasis: a situation performed with more emphasis;
viii. Reciprocal: a situation performed by at least two different participants reciprocally

These functions, both core and additional ones, are very important for the discussion of PM *-pödï* and will be exemplified in what follows through Akawaio.

3. Methods and issues. The problem of how to recognize linguistic phenomena is central in typology. In order to pursue a functional analysis, typologists usually identify potential constructions falling under the definition they adopt and then analyze the overall context in which the construction appears, along with the grammarian's description. Focusing on PMs, we must evaluate the functional-semantic value that the PM adds to the inherent lexical-semantic meaning of the verb. To do so, we have to examine the linguistic context in which the pluractional verb is inserted. In other words, we must interpret and understand the event construal—that is, how a speaker conceptualizes experience through language (Langacker 1987, 1991, 1993; Croft and Cruse 2004). In practice, this means we have to understand how a specific situation is construed by the speaker and how the PM plays a role within the same situation—that is, how the PM marker impacts the semantics of the verb. From

this it follows that we sympathize with Croft's (2012) proposal of treating lexical and grammatical semantics of verbs (i.e., lexical and grammatical aspect) as clearly separate entities only from a theoretical point of view, even though they are inseparable (not discernable) entities from a discourse (corpus-based) point of view (see unidimensional and bidimensional approach to verbal aspect in Croft 2012:ch. 2). The pluractional conceptual space (see **5**) should be read following this perspective, too. In other words, the functions posited in the space should be interpreted as values resulting from the strict relationship between the lexical value of the verb (phrase) and the grammatical value of the PM. This approach has already proven to be particularly useful when adopted to explain verbal morphology and PMs in particular (e.g., Inglese and Mattiola 2020).

From a language-specific point of view, the situation is slightly more straightforward because, unlike typology, in this case, we have at our disposal some additional contextual hints (e.g., adverbial phrases—*often*, *always*, and so on—and/or temporal adverbials—*every morning*, *each year*, and so on). These elements can help in better understanding the event (and situational) construal, even though they cannot be considered conclusive and, sometimes, they can also blur PM functional interpretation. In corpus-based studies, we can access the whole text in which our occurrences are found, and this is important because the more we know about the narrative context, the better we can understand each event construal.

Before turning to the functional analysis, we must explain one innovative notion that we adopt in this paper that is connected to these methodological issues. We have decided not to force any single functional interpretation. In other words, if we are not able to narrow a given event construal to a single functional category, rather than insisting on a single interpretation and thus creating a possible misinterpretation, or removing the example from our database, we opt to assign a double or triple function to the example. As such, in the next sections, many examples are assigned to two or even three possible functions, with each function label separated by a slash. The slashes are to be interpreted as disjunct coordination ('or'), meaning that as far as we know, that specific example could be interpreted as being driven by any one of the mentioned event construals.

4. The functional domain of *-pödï* in Akawaio. As described in **1**, we base our analysis on the 10,799-word corpus of texts found as appendix B to Caesar-Fox (2003). Out of 2,436 tokens of verbs within the corpus, we found 244 occurrences of the Akawaio PM *-pödï* and its allomorphs. This means that 10.02% of the verb tokens have this derivational suffix. We classified each occurrence into one or more of the functions as defined in **2**. It is important to recognize that the texts in this corpus were not collected for the purpose of

answering our specific questions about the functions of *-pödï* and, in particular, that the translations are often quite free, which sometimes makes it difficult to clearly identify the functional distinctions of interest to the present paper. Because the same sentence can often have different readings depending on the context or, for instance, on the actional value of the verb, we have found it more useful to list and categorize all the possible readings that a form can have. As such, we classify most occurrences of *-pödï* into sets of two (or, more rarely, three or even four) functions rather than into single functions. Of the 244 occurrences, it was not clear to us how to interpret 25, so we removed these instances from our analysis, analyzing only the remaining 219.

The main uses of *-pödï* 'PLURACTIONAL' in Akawaio are, in order of frequency: (i) frequentative / habitual / generic imperfective readings; (ii) iterative (event-internal plurality, iterative, frequentative) readings; (iii) participant plurality readings; and, quite rarely, (iv) a set of functions connected with continuativity. The frequency for each functional set is reported in table 1.

In the remainder of this section, we briefly discuss and exemplify each of these sets of functions before turning to an overview of the functional domain of the PM in Akawaio in **5**.

4.1. The frequentative/habitual/generic imperfective set of functions. These are the functions that the PM of Akawaio encodes most often, representing almost three quarters of the instances in the corpus. As observed

TABLE 1
FREQUENCY OF FUNCTIONS EXPRESSED BY *-PÖDÏ* 'PLURACTIONAL' IN AKAWAIO

Set(s)	Function(s)	N°	%
Frequentativity/ habituality/ generic imperfectivity	*frequentative/habitual*	103	47.0 %
	frequentative	32	14.6 %
	frequentative/habitual/generic imperfective	15	6.8 %
	generic imperfective	12	5.5 %
	Total occurrences	**162**	**73.9 %**
Iterativity	*iterative*	30	13.7 %
	event-internal plurality/iterative	10	4.6 %
	Total occurrences	**40**	**18.3 %**
Participant plurality	*participant plurality*	10	4.6 %
	participant plurality/iterative	2	0.9 %
	spatial distributive	2	0.9 %
	Total occurrences	**14**	**6.4 %**
Continuativity	*event-internal plurality/continuative/iterative*	2	0.9 %
	continuative	1	0.5 %
	Total occurrences	**3**	**1.4 %**
	Grand total occurrences	**219**	**100 %**

in **2**, frequentative, habitual, and generic imperfective are functions that involve a situation being repeated on different occasions—that is, between the repetitions a span of time occurs that is sufficiently long to make each occurrence be conceived as pertaining to a different occasion. The difference between these three functions consists in the regularity of the repetitions: while frequentative involves a random plurality, habitual requires a regular repetition making the situation typical of the relative time frame. In contrast to both, generic imperfective encodes the maximal degree of plurality, that is, when a situation occurs always as a quality of an entity or a continuous state (whether permanent or temporary). Our classification of the occurrences of *-pödï* into these different functions are based primarily on our understanding of the semantics in each specific discourse context, with an additional pivotal role played by presence in the translation of adverbs such as 'often', 'always', 'regularly', and so on. For many examples, we opted to classify the function into more than one category, as we could not eliminate competing analyses without doubt.

In the corpus we found occurrences with a frequentative reading (6), a frequentative/habitual reading (7), a generic imperfective reading (8), and, finally, some occurrences that could be interpreted as representing any of the three functions, frequentative/habitual/generic imperfective (9).

(6) Frequentative
im . . . mörö wenai ku udö**bödï** mörö
im mörö wenai kuru u–tö–**bödï** mörö
um that because EM 1–go–**PLAC** A.I.

'That is really why **I keep going up and down**.' (lit. 'go frequently') (RA Personal Narrative 156 <546.078>)

(7) Frequentative/habitual
Möröbang yau tok eji iwang be wenai dö**bödï**
möröbang yau tok eji iwang pe wenai Ø–tö–**bödï**
thereafter LOC 3PL be hunger ATTR because 1–go–**PLAC**

'So, because they are hungry, **I keep going** to Venezuela **several times**.' (lit. 'go frequently/habitually') (RA Personal Narrative 168 <593.426>)

(8) Generic imperfective
ka'pong be na'kö ye'**pödï**'pï, ka'pong be sak ji ye'**pödï**'pï
ka'pong pe na'kö y–eji–**bödï**–'pï ka'pong pe sa'ne
person ATTR maybe 3–be–**PLAC**–PST person ATTR EM

ji y–eji–**bödï**–'pï
EM 3–be–**PLAC**–PST

'Maybe **he used to be** a person**, he used to be** a person. (TL Makanaimo 013 <45.915>)

(9) Frequentative/habitual/generic imperfective
ka'pong be sak ye'pödï'pï mogo pena a'tai ja'ne ji ye'pödï'pï

ka'pong	pe	sa'ne	y–eji–**bödï**–'pï	mogo	pena
person	ATTR	EM	3–be–**PLAC**–PST	CRTN	long.ago

a'tai	sa'ne	ji	y–eji–bödï–'pï
when	EM	EM	3–be–PLAC–PST

'He **was** a person long ago and he used to be there.' (lit. 'He used to be / was a person . . . ') (TL Piyai'ma 012 <42.642>)

What these examples illustrate is that, even though the functional differences seem to be clear-cut theoretically, in real contexts there are always some cases where it can be difficult to discern one from the others. For example, if we take into consideration the case of the first verb in (10), *y–eji–**bödï**–'pï* 'he **was** a person (3–be–**PLAC**–PST)', we realize that, under different circumstances, this verb could be construed differently. The reading could be understood as generic imperfective if we consider the situation as a temporary state or a quality of the subject: an entity that used to be a person and that is no longer a person (remember that the story talks about a mythological entity). However, a habitual reading holds, too, if we consider the situation as a specific recurrent happening that characterizes the subject and that is typical of a time frame (e.g., 'he [customarily] used to be a person [as a set of qualities that he used to have on different regular occasions]'). The frequentative reading would be if we consider the subject as an entity that used to recurrently have the qualities that are typical of a person, but on different individual occasions rather than regularly over a specified period of time. In this specific instance, each of these readings is a possible construal that the speaker might have intended, so in order to not alter the overall analysis, we decided to list all the possible construals (as explained in **3**).

These examples also illustrate a more general pattern, which is that in identifying the functions in usage, not only the current context of use but also the actional type (*Aktionsart*) of the predicate plays a crucial role in the process. For instance, a stative verb like *eji* 'be' is more readily interpreted as a generic imperfective, whereas a punctual verb like *ta* 'say' or *tö* 'go' is more readily interpreted as frequentative or habitual.

4.2. The iterative set of functions. Roughly one quarter of the instances in the corpus fall into the iterative set of functions, where we find the intersection of iterativity and event-internal plurality. Here, the difference between these functions lies in the type of plurality involved: while we saw that frequentativity expresses a repetition of situations occurring on different occasions, iterativity involves a repetition that is internal to a single occasion, and event-internal plurality involves a plurality inside a single situation—that is, a

singular (but complex) event composed of different repetitive sub-phases that are not discrete (and may hardly be discernable from each other). We illustrate here the iterative reading alone (10) and the event-internal plurality/iterative reading (11).

(10) Iterative
naigaza kuru pöröu enno'**pödï** zero ta'pï iya ji mörö
naigaza kuru pöröu ennogï–**bödï**–Ø zerö ta–'pï
how EM arrow shoot–**PLAC**–PRS this say–PST

i–ya ji mörö
3–ERG EM A.I.

'"How, really, will (we) **shoot** the arrow **more than one time**?" he said.' (lit. 'how do/will we iteratively shoot the arrow?') (RA Piyai'ma Story 033 <106.543>)

(11) Event-internal plural/iterative
auguaramï rö ji enebök tok eji, möröbang gong, tok da'körö**bödï**
a–guaramï rö ji ene–bök tok eji–Ø möröbang gong
2–cry EM EM see–PROG 3PL be–PRS thereafter PL

tok da'körö–**bödï**–Ø
3PL laugh–**PLAC**–PRS

'They will be watching at you crying and will make fun of you by **laughing**.'

(lit. 'They are seeing your crying, then they repeatedly laugh/mock.') (EW Kanaimö 105)

As explained by Cusic (1981:78), event-internal plurality tends to be determined by a combination of the functional value of the pluractional marker and the actional value (*Aktionsart*) of the verb stem. For example, in (11) the verb *da'körö* 'laugh' is in some way inherently plural, what Cusic calls a *repetitive* verb. Combined with such verbs, the pluractional marker may exaggerate the event-internal repetition (e.g., laughing longer or more intensely) and/or mark the iteration of the event-internal plurality (e.g., repeated bursts of laughter). As such, the crucial factor for identifying this function is the inherent actional value of the verb, with a secondary factor being the semantics found in the context of use.

4.3. The participant plurality set of functions. The participant plurality set of functions represents a mere 14 instances, a bit more than 5% of the instances in the corpus. In this case, the element that helps in classifying the occurrences of *-pödï* is plurality of the participants involved in the occasion, despite the lack of an obvious frequentative or habitual interpretation. The three different sub-functions we have found in the Akawaio texts are

participant plurality (12), participant plurality/iterativity (13), and spatial distributive (14).

(12) Participant plurality
möra'tai ji kajiri engji tok a a'tai mörö ji tok ma'ta**bödï**'pï ha..aing!
möra'tai ji kajiri engji tok ya a'tai mörö
at.that.time EM manioc.beer drink 3PL ERG when A.I

ji tok ma'ta–**bödï**–'pï haing
EM 3PL die–**PLAC**–PST drama

'At that time when they drank the kasiri, they **died one by one,** haing!' (lit. they individually died') (RA Piyai'ma Story 096 <312.802>)

(13) Participant plurality/iterativity
auye'sak a'tai tagï'**pö'**sek murang bo na inonggaauya, nïgadaine tok ko
a–yebï–zak a'tai t–agïdï–**bödï**–ze–k murang po
2–come–PF when ADV–cut–**PLAC**–PRTCPL–STYLE charm onto

na i–nongga–Ø–au–ya n–ka–dai–ne tok ko
? 3–leave–PST–2–ERG 3SBJ–say–PST–EM 3PL EM

'When you have returned (from the hunt), you have **to cut (the game) into pieces** then place it on the charm.' (lit. '. . . cutting it multiply [into several], you leave it on the charm, they say.') (EW Kanaimö 044)

(14) Spatial distributive
abïne se gaza diö**bö'**kö, imanumï'pï ji mörö pesou, sozong, sozong, sozong, sozong
abïne serö kaza itö–**bödï**–gö i–manumï–'pï ji mörö
wait this like go–**PLAC**–IMP 3–dance–PST EM A.I.

pesou sozong sozong
rhythmic.stamping sway.in.dance sway.in.dance

sozong sozong
sway.in.dance sway.in.dance

'Wait, **go around** like this he said to the man, piyai'ma showed him by dancing *pesou*, *sozong, sozong, sozong*.' (lit. 'like this go [distr]') (TL Piyai'ma 054 <185.315>)

One noteworthy element of the participant plurality function of *-pödï* is that it only marks plurality of absolutive (S/P) participants (that is, however, not uncommon cross-linguistically, e.g., Dressler 1968:70, §40; Cusic 1981:111–23; Durie 1986; Mithun 1988:214; Mattiola 2019:26). In (12) the same plural participants are the A arguments who drink manioc beer (presumably one by one) and then the S participants who die (one by one), but the pluractional only occurs on the intransitive verb. In (13) the game is the P that is to be cut, and the

pluractional marker on the verb is what makes it explicit that after the cutting, the resulting P is to be plural, or cut 'into pieces'.

4.4. The continuative set of functions. Even though there are only three instances of this function, we report some examples in order to illustrate more comprehensively the full range of functions of the pluractional marker in Akawaio. The functions included in this set are of course continuativity, and iterativity and event-internal plurality combined with the first one. To detect this function, the situation should be continuative rather than an actual repetition. In the corpus, we found only continuativity (15) and event-internal plurality/continuativity/iterativity (16).

(15) Continuative
nai ji da'pï kaiguji ya möröng . . . tuna sak en**bödï**iya
nai ji ta–'pï kaiguji ya mörö–ng tuna sa'ne
where EM say–PST jaguar ERG A.I.–STYLE water EM

ene–**bödï**–i–ya
see–**PLAC**–3–ERG

'"Where is it?" the tiger asked, "there . . ." he said while **looking** into the water.' (lit. 'continuously watching the water') (RA Kone'o Story 015 <44.104>)

(16) Event-internal plural/continuative/iterative
urö rï'kwö urö domba nïgaai'nek kaza rï'kwö rö ebogoima**bö'**aik
urö rï'kwö urö domba n–ga–aik–nek gaza rï'kwö
1SG DIM 1SG relative 3SBJ–say–PRS–REL like DIM

rö ebogoima–**bödï**–aik
EM feel.sad–**PLAC**–PRS

'Like what my relative said, I myself **I am feeling sad**.' (lit. I continuously/iteratively feel sad.) (R Personal Narrative 001 <0.000>)

In (15) the event construal is undoubtedly continuative because the action is prolonged by the subject while doing something else (saying something). But in (16), the verb 'feel sad' allows different interpretations: (i) event-internal plural because its *Aktionsart* can also suggest a repetitive situation, (ii) continuative because the prolonged interpretation holds as well, and (iii) iterative if we understand it as different situations of sadness broken up by non-sad moments.

This concludes the section in which we explain our coding decisions, showing the kinds of examples of *-pödï* that we place into each functional subcategory of pluractionality. The situation of pluractionality in Akawaio is unusually clear due to the existence of only one marker for the function, *-pödï*, a situation that is quite rare in the languages of the world. As detailed in Mattiola

(2019), we usually find more than one marker covering different subsets of pluractional functions, which complicates the typological interpretation of the pluractional functional domain. We now turn to a discussion of the ways in which the Akawaio pluractional fits into the larger typological picture, laying out both the range of functions and the overall frequency of these functions by means of a semantic map.

5. The semantic map of pluractional verbs in Akawaio. A tool for modeling such broad multifunctionality is the semantic map model. Semantic maps are a tool for studying the patterns of co-expression from a cross-linguistic perspective, that is, the multifunctionality of grammatical strategies and lexical polysemy. A semantic map is a visual representation of the functions of a functional domain or of the functions encoded by a linguistic phenomenon, and these functions are connected to each other by lines, representing a semantic/functional similarity: the more two functions are directly connected in the conceptual space, the more they are semantically/functionally similar. Even though at first sight this tool can appear to be a simple representation of a linguist's interpretation of data, this is not the case. Indeed, semantic maps do not represent an *a priori* analysis, that is, the result of speculative thinking by a researcher, but rather they are scientific outcomes. It follows that the semantic/functional similarity among functions depicted by the network should be based on empirical cross-linguistic data. An important distinction proposed by Croft (2001) is between the terms *conceptual space* (the network of functions and considered as universal) and semantic map (the language-specific mapping of a conceptual space) (for further information see Croft 2001; Haspelmath 2003; Georgakopoulos and Polis 2018).

In figure 1, we can see the *pluractional conceptual space* as proposed by Mattiola (2019). For convenience, we highlight the core functions. Note that

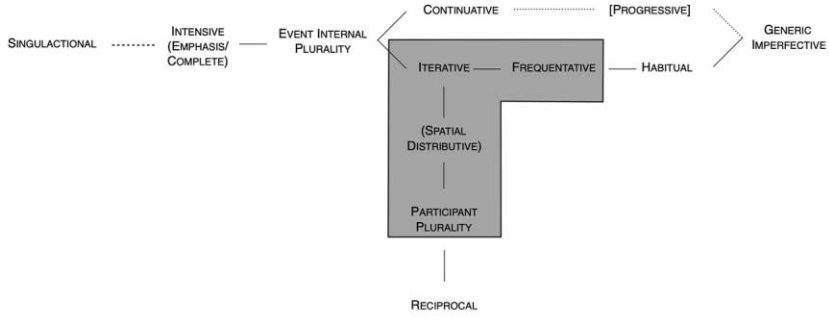

FIG. 1—Conceptual space of pluractional markers (Mattiola 2019:45)

this conceptual space should not be considered a language-specific semantic map. This conceptual space is the tool through which we analyze the functional domain of the Akawaio morpheme *-pödi*.

In the next two sections, we will first show the semantic map of Akawaio PM *-pödï* in trying to understand why this suffix maps the pluractional conceptual space in such a way. Then we will try to investigate more in detail the frequency of *-pödï* in our corpus through a semantic map that incorporates frequency information.

5.1. Extended semantic map of Akawaio PM *-pödï*. Having seen the functional range of the Akawaio pluractional marker *-pödï*, we can now analyze where all these possible readings occur in the overall pluractional typological conceptual space.

The single pluractional marker *-pödï* covers all the core functions (iterative, frequentative, spatial distributive, and participant plurality) and also some parts of the area of additional functions. In fact, the Akawaio pluractional domain goes beyond the core areas in both directions: on the left, it encodes event-internal plurality, while on the right it can cover functions to the extreme edge of the space—that is, habituality and generic imperfectivity. In a few cases, it can also encode continuativity on the top of the space.

The functional domain of *-pödï* is potentially shaped by the presence of other strategies marking functions that are adjacent to the functions of *-pödï* in the space, as shown in figure 2. For example, in Akawaio reciprocal situations are formally expressed by the detransitivizer prefix *e'-* (17).

(17) Reciprocity expressed by the prefix *e'-* 'DETRANSITIVIZER'
Tïzewa'nomazeng be tok e'pödï'pï

t–**e'**–ewa'noma–zeng	pe	tok	eji–bödï–'pï
ADV–**DETR**–go.to.war.with–ABS.NZR	ATTR	3PL	be–PLAC–PST

'They used to **war with each other**.' (lit. 'They were (habitually) as ones **who warred with each other**.') (TL Birdman Story 055 <176.658>)

Similarly, the suffix *-bök* 'PROGRESSIVE' encodes progressive meaning (18), and several particles (e.g., *kuru*, *ji*, *sa'ne*, *ning*, etc.) encode emphatic meanings (19).

(18) Progressive expressed by *-bök* 'PROG' plus auxiliary
kajiri engjibök tok eji'pïng–ng

kajiri	engji–**bök**	tok	**eji**–'pï–ng–ng
manioc.beer	drink–**PROG**	3PL	**be**–PST–STYLE–STYLE

'They **were drinking** kajiri.' (EW Kanaimö 134)

(19) Emphatic particles
mörö wenai Agawaio **kuru** urö dauya beng **sa'ne** tok maimu yau **ji** enazak, agawaio be **ji** enazak, usemo'ka'pï **ji**
mörö wenai Akawaio **kuru** urö ta–u–ya beng **sa'ne**
that because Akawaio **EM** 1SG say–1–ERG NEG **EM**
tok maimu yau **ji** Ø–ena–zak Akawaio pe **ji**
3PL language in **EM** 1–become–PF Akawaio ATTR **EM**
Ø–ena–zak u–z–emo'ka–'pï **ji**
1–become–PF 1–DETR–raise–PST **EM**
'Therefore, I am not saying that I am **really** an Akawaio, but I speak their language that has made me an Akawaio because I grew up with them.' (lit. 'Therefore, I don't **really** say that I am a **real** akawaio, but I have become **really** in their language, I have become **really** like an Akawaio, I **really** grew up becoming [like that].')
(RA Personal Narrative 070 <204.084>)

The semantic map in figure 2 is already quite rich relative to most descriptions of this functional domain in Cariban languages, but since we not only identified these functions in texts but also counted the number of the occurrences of each function, we can also characterize this map in terms of the relative frequency of each function.

5.2. Frequency-based semantic map of Akawaio PM *-pödï*. When we pay attention to frequency, as in table 2 (containing the same numbers as table 1 but now sorted according to the categories in our semantic map), we see that the dominant readings are iterative, frequentative, habitual, and generic imperfective (keeping in mind that these functions are not always distinguishable from each other). The question we can now ask is: Why is this distribution uneven?

From this distribution, we can hypothesize that the Akawaio pluractional marker *-pödï* is in a possible ongoing process of grammaticalization, shifting

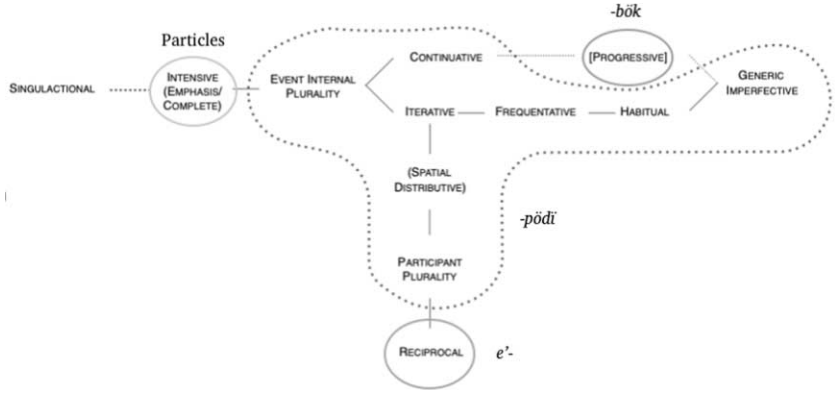

FIG. 2—Semantic map of *-pödï* including other morphology in the pluractional conceptual space

TABLE 2
FREQUENCY OF FUNCTIONS OF AKAWAIO *-PÖDÏ* 'PLURACTIONAL' SORTED ACCORDING TO THE CATEGORIES OF OUR SEMANTIC MAP

Function	N° occurrences	%
Frequentative-habitual-generic imperfective	**130**	**59.3**
Frequentative/habitual	103	47.0
Frequentative/habitual/generic imperfective	15	6.8
Generic imperfective	12	5.5
Iterative-frequentative	**62**	**28.3**
Frequentative	32	14.6
Iterative	30	13.7
Other core pluractional functions	**24**	**11.0**
Event-internal plural or iterative	10	4.6
Participant plural	10	4.6
Participant plural/iterative	2	0.9
Spatial distributive	2	0.9
Other peripheral pluractional functions	**3**	**1.4**
Event internal plurality/continuative/iterative	2	0.9
Continuative	1	0.5
Total	**219**	**100**

the preponderance of usage from the more lexical aspectual readings inherent in the core pluractional functions (those to the left) toward the more grammatical aspectual meanings of the now dominant readings of habitual and generic imperfective (to the right). We return to this diachronic hypothesis in **7**.

In cross-linguistic perspective, the functions on the right tend to be more often expressed by grammaticalized strategies (typically inflectional morphology, see Hopper and Traugott 2003:7), whereas the ones in the center and on the left are expressed by less grammaticalized strategies (typically derivational morphology or lexical strategies; Mattiola 2019:62–64). In Akawaio the frequency of the functions on the right is particularly high and thus more grammaticalized. Focusing on the lower frequency, more lexical pluractional functions, we show that some are now expressed lexically and others via innovative competing morphology.

Theoretical and typological works on pluractionality recognize **event-internal plurality** to be the most lexical function among those generally expressed by pluractional markers in the languages of the world (e.g., Mattiola 2019:33–34). As noted by Cusic (1981:78), event-internal plurality represents a *repetitive action* rather than an actual *repeated action*. While marking event-internal plurality is actually a proper core function of PMs in some languages (e.g., Konso—Afro-Asiatic, Cushitic—Orkaydo and Mous 2017), there are others where it is more often subsumed in the lexical meaning of the verb, being more of an actional value (i.e., *Aktionsart*). The Akawaio pluractional is of the second type, rarely marking verbs that are inherently

event-internal plurals. For example, in (20) neither the verb *turumï* 'whistle' nor the sequence of the ideophone *wiishik* 'sound of whistling' and the verb *ta* 'say' are explicitly marked with *-pödï*.

(20) **"wiishik" taiya** ji mörö oroioroi berö **diurumï**
wiishik ta–i–ya ji mörö oroioroi pe–rö
whistle say–3–ERG EM FUT little.tinamou ATTR–EM

i–turumï
3–whistle

'It will then whistle "*wiishik*" or it will **whistle** like the mam (little tinamou).' (lit. 'It will then **say "whistle,"** like the little tinamou it **whistles**.') (EW Kanaimö 017-018)

Given the low number of attestations of *-pödï* marking event-internal plurality, we conclude that this function is generally unexpressed formally in Akawaio but rather is understood as part of the lexical actional value of such verbs.[5]

Going downwards on the semantic map, we have only two examples of a spatial distributive use of *-pödï*: one in combination with the verb *tö* 'go' (15) and one with the verb *eji* 'be'. However, all other examples of *të–bödï* 'go–PLAC' (five of six) are clear cases of frequentative and habitual. Several examples of spatial distributivity are expressed, as in English, via adverbials like *awörö* that translate as 'around' (21), and some are not explicitly coded (22).

(21) mörörïk biningba'pïya, **se awörö** rök, chiya rö wïk kaijarö sa'ne ji biningba'pïya
mörörïk pinimï–ba–'pï–i–ya **serö awörö** rö–k
then walk–CAUS–PST–3–ERG **this around** EM–STYLE

chiya rö wïk kaijarö sa'ne ji
far.away EM mountain each EM EM

pinimï–ba–'pï–i–ya
walk–CAUS–PST–3–ERG

'The piyai'ma walk him **all over the place**, away along each mountain.' (TL Piyai'ma 029 <110.611>)

(22) haing! Biningbabök ye'pödï'pï
haing pinimï–ba–bök y–eji–bödï–'pï
drama walk–CAUS–PROG 3–be–PLAC–PST

'Haing! He used to walk him **all over the place**.' (TL Piyai'ma 030 <116.768>)

[5] Note that this claim only represents a tendency because there are examples like *da'körö–bödï* 'laugh–PLAC', in which an inherently event-internal verb appears to be almost lexicalized with the PM.

Given the extensive use of the cognate pluractional suffix in Kari'nja to encode spatial distributivity (**6**), it is remarkable that we find only two examples in the entire Akawaio corpus. In (22) the use of *-pödï* in the auxiliary is a marker of frequentative/habitual rather than spatial distributive.

Turning to less lexical functions, we see that, alongside some attestations of *-pödï*, the continuative aspectual meaning is frequently expressed by an innovative construction in which the verb bears the progressive marker *-bök* 'PROG' and the auxiliary is not the standard copula but rather the continuative auxiliary verb *ko'mamï* 'live' (Caesar-Fox 2003:115).

(23) Continuative auxiliary *ko'mamï* 'live'
mörö wenai serau pïzamo enuba**bök go'mang**zak mörö
mörö wenai serau pïzamo enuba–**bök** Ø–**ko'mamï**–zak
that because here these.ANIM teach–PROG 1–**live**–PF

mörö
A.I.

'That is why I have **kept** (lit. 'lived') teaching these here.' (RA Personal Narrative 181 <632.754>)

Similarly, alongside a few attestations of *-pödï* marking participant plurality, we see another morpheme, *-gong* 'PLURAL ABSOLUTIVE', as in (24).[6]

(24) Collective (or plural) absolutive marker *-gong*
turong**gong** anö'pï iya ganang.
turonnö–**gong** anö–'pï i–ya ganang
another–**PL** eat.meat–PST 3–ERG already

'He had eaten **the others** already.' (RA Piyai'ma Story 017 <45.856>)

Since *-gong* can be also applied to verbs, it might be better described as a competing pluractional marker with the function of encoding the plurality of participants involved in the occasion (i.e., participant plurality). Caesar-Fox (2003:86) describes the morpheme *-gong* as a nominal number marker, even though she recognizes it as a non-traditional marker of this category. And indeed, against 13 examples where *-gong* marks collective participants of main clause verbs, the corpus contains 100 examples of *-gong* as a nominal or adverbial suffix. The fact that *-gong* is more often used with nouns than with verbs is a strong argument against analyzing it as a pluractional marker per se. An even stronger piece of evidence against the interpretation of *-gong* as a pluractional marker would be situations in which it is straightforwardly used to express

[6] Note that Caesar-Fox (2003) describes the number markers as representing a collective-non-collective distinction, but she also commonly refers to them as "plural," with this being the gloss given to *-gong*. While we suspect that the pan-Cariban meaning 'collective' is probably correct, the distinction is not relevant to our argument here, so we maintain Caesar-Fox's gloss 'PL'.

plurality of participants in an occasion in which there is an evident single situation and not a plurality of situations (i.e., the clear absence of pluractionality) like in (25).

(25) Collective (or plural) absolutive only
e'tane serö ji ado'kanïgï**gong**bök e'aik

e'tane	zerö	ji	a–do'kanïgï–**gong**–bök	Ø–eji–aik
but	this	EM	2–understand–**PL.ABS**–PROG	1–be–PRS

'But now I am beginning to understand it.' (lit. 'But really now I am understanding you**-all.**') (R Personal Narrative 026 <121.226>)

In (25) the speaker has been a participant in a public meeting in which previous speakers have been praising a community nurse who is retiring after many years in charge of the village health post. Here the reading of *-gong* is clearly to indicate that the speaker is finally understanding what the previous speakers (in the collective) have been saying (i.e., that the nurse is really leaving and they don't want her to go). In this case, there is no obvious plurality of events of understanding.

To sum up this section so far, although there are a few attestations of the PM *-pödï* in situations where it appears to mark either continuous or participant plurality, the presence in the grammar of Akawaio of the independent markers *ko'mamï* 'CONTINUATIVE' and *-gong* 'PLURAL.ABSOLUTIVE' suggests that these uses of *-pödï* are somewhat marginal, perhaps residual occurrences. In other words, it seems that *-pödï* is shifting its functional domain from the pluractional core area (the middle of the space, now coded by separate markers) towards the periphery on the right. In figure 3 we model this situation in the pluractional conceptual space, showing in the grey area the most frequent functions *-pödï* expresses and the competing strategies discussed above.

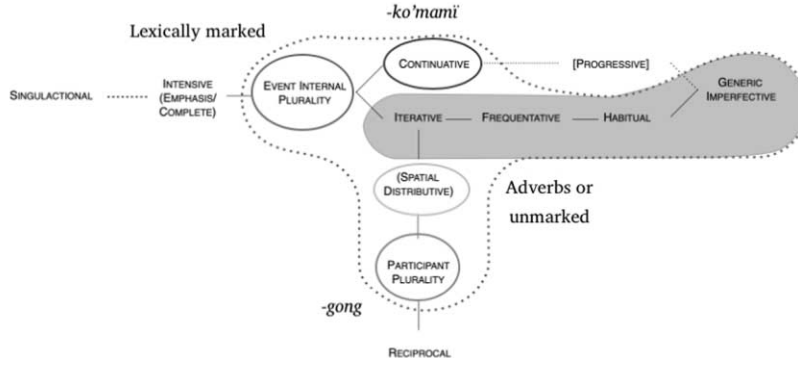

FIG. 3—Restricted semantic map of Akawaio pluractional marker *-pödï* with its competing markers

Given that we hypothesize a recent shift in the meaning of the Akawaio PM away from the functions that are now marginal, maintaining the core functions of iterative and frequentative and greatly expanding the more grammatical functions of habitual and generic imperfective, it also is fair to ask what other functions might serve (or once have served) these meanings. In Akawaio we have seen no other constructions that express the iterative or frequentative functions, so we posit that these functions represent prior uses of the PM *-pödï* that continue into the present. This hypothesis is consistent with the comparative evidence that we present in **6**.

Akawaio (and the closely related Pemóng Group languages) have recently lost much of the Proto-Cariban verbal inflectional morphology (Gildea 1992: 181–209), including the morphology that expresses imperfective (including habitual) action in other languages of the family. There are several different constructions that have assumed this function in the various languages that have lost the older morphology, including cognates to the Akawaio progressive construction (e.g., Apalaí, ISO code 693-3: apy; Gildea 1998:210–13), agent nominalizations in predicate nominal constructions (Gildea 1998:183–88; 236–38), and an innovative general imperfective morpheme derived from an action nominalizer (Gildea 1998:161–67). This last construction is also the most commonly used to express generic imperfective in all the innovative languages, including Akawaio. Cognates to all of these constructions are attested in the Akawaio texts, but their use to mark habitual in Akawaio is quite limited, presumably because they have been displaced by the expansion of the PM *-pödï* in the habitual function. Crucially, this is the first study to show any Cariban language that uses a pluractional marker to express either habitual or generic imperfective functions.

6. Cognates of Akawaio *-pödï* in Cariban languages. Looking through descriptions of other Cariban languages, we discover three strategies for marking the pluractional: cognates to Akawaio *-pödï*, a verbal suffix *-tke* 'PLURACTIONAL', and reduplication. We also find languages where there appears to be no conventionalized means of marking pluractional situations. We begin with cognates to Akawaio *-pödï* and leave the other strategies to **7**.

We cannot reconstruct a non-pluractional source for Cariban **-pëtï*,[7] but by taking a closer look at the functional distribution of the cognate morpheme *-potï* in Kari'nja, we refine our suggestion that the functional distribution in Akawaio reflects further semantic innovation from a more typical pluractional source. We first focus on Kari'nja because, on the one hand, it is the most

[7] This reconstructed form is ours, following the sound correspondences laid out in Meira and Franchetto (2005); Gildea and Payne (2007); Meira, Hoff, and Gildea (2010); and Gildea, Hoff, and Meira (2010).

genetically and geographically distant of the languages with a reflex of **-pëtï* (cf. **7**) and, on the other hand, there is a public source of Kari'nja narrative texts (from Hoff 1968), which were parsed (and later generously shared) by Sérgio Meira.

The suffix *-potï* in Kari'nja can express mainly the core pluractional functions: iterative (26), frequentative (27), participant plural (28) and spatial distributive (29).

(26) i:ya ro:ten s–u:ro–**potï**–:se
thence only 1A–blow–**ITER**–FUT2

'Just let me blow some smoke on her repeatedly.'

(27) a:wu rohkon pa:pa 'wa Ø–eka:ritï–**potï**–hpo ke
1 only father AGT 3–tell–**ITER**–PST.NZR INSTR

'Only I (know them) because my father often told them,'

(28) oko:wente ø–apo:ka–**potï**–rï i–'wa–ine ina:ro–mo–mpo
red.worm 3–dry–**ITER**–NZR 3–AGT–COLL them–?–PST

ayu:ru–**potï**–ya–ton
bake–**ITER**–PRS–COLL

'and also the red worm, after they have dried **them** they bake **them** . . . '

(29) yo:rokan t–w–to–**potï**–se man i–'wa t–epo:rï–se
evil.spirit T–S_A–go–**ITER**–PTCP 3:COP 3–AGT T–find–PTCP

man
3:COP

'the monster, he went **around and about** and found this rock.'

The peripheral pluractional functions of habitual, continuative, and event internal plurality are also attested but are quite rare. In this corpus of 10,656 words, we found 45 instances of *-potï*. This number alone invites a comparison with the Akawaio numbers. However, in order to compare the two corpora, we had to exclude texts of genres not found in both. More specifically, from the Akawaio corpus we excluded Tareng healing chants (six texts) and praising rhymes (four texts),[8] and from the Kari'nja corpus we excluded conversations (one text).[9] The new Akawaio counts for *-pödï* functions are shown in table 3.

[8] The new corpus is composed of 9,364 words (2,091 are verbs); from the initial 244 occurrences, we had to also exclude 11 *-pödï* occurrences (4 frequentative, 3 frequentative/habitual, 2 iterative, 1 frequentative/habitual/generic imperfective, plus 1 unclear occurrence that was already excluded in the first place), leaving 209 occurrences to compare with Kari'nja. The new counts are shown in table 3.

[9] The original Kari'nja corpus is composed of 10,656 words (3,105 verbs with 45 *-potï* occurrences) and contains 8 traditional myths, 3 local historical narratives, 2 personal histories, and a

TABLE 3
NEW COUNTS OF THE FREQUENCY OF FUNCTIONS EXPRESSED BY *-PÖDÏ* IN AKAWAIO

Function	N° occurrences	%
Frequentative-habitual-generic imperfective	**126**	**60.2**
Frequentative/habitual	100	47.8
Frequentative/habitual/generic imperfective	14	6.76
Generic imperfective	12	5.7
Iterative-frequentative	**56**	**26.8**
Frequentative	28	13.4
Iterative	28	13.4
Other core pluractional functions	**24**	**11.6**
Event-internal plural or iterative	10	4.8
Participant plural	10	4.8
Participant plural/iterative	2	1.0
Spatial distributive	2	1.0
Other peripheral pluractional functions	**3**	**1.4**
Event internal plurality/continuative/iterative	2	1.0
Continuative	1	0.4
Total	**209**	**100**

The difference in the density of the pluractional morpheme is striking: in the slightly larger corpus of Kari'nja, the pluractional suffix *-potï* occurs with roughly one fifth the frequency of the cognate pluractional suffix in Akawaio. The numbers become even more remarkable if we compare the ratio between pluractional occurrences and the total number of verbs in the Akawaio and Kari'nja texts. We found 233 (209 occurrences plus 24 unclear ones) occurrences of *-pödï* out of 2,091 verbs in Akawaio texts, that is, 11.14% of the Akawaio verbs bear the PM. In contrast, we found 40 occurrences of *-potï* out of 2,953 verbs in the Kari'nja texts, so only 1.35% of the Kari'nja verbs bear the cognate PM. Comparing the ratio of verb with the PMs to the overall count of verbs, Akawaio *-pödï* is more than eight times more frequent than Kari'nja *-potï*.

In table 4 we look at the functional distribution of the Kari'nja reflex, *-potï*.

This distribution is quite different from the functional distribution found in Akawaio. When looking at the core pluractional functions (iterative, frequentative, spatial distributivity, and participant plural), in Kari'nja these account for a total of 87.5% (35/40) of the occurrences of *-potï* in Hoff's Kari'nja corpus. In terms of frequency, the most striking difference is that the spatial distributive function is scarcely attested in Akawaio (2 of 209, 1.0%), whereas this function alone accounts for 37.5% (15 of 40) of the pluractional uses in Kari'nja. In contrast, for Akawaio the four core functions alone (i.e., not

conversation. We excluded only the conversation (Text 16). So, the final corpus counts 9,823 words (2,953 verbs) with 40 occurrences of *-potï*. The final counts are shown in table 4.

TABLE 4
FREQUENCY OF FUNCTIONS EXPRESSED BY *-potï* 'ITERATIVE' IN KARI'NJA

Function	N° occurrences	%
Spatial distributive	**15**	**37.5**
Other pluractional core functions	**20**	**50.0**
Participant plural	6	15.0
Event-internal plural/iterative	4	10.0
Frequentative	4	10.0
Iterative/participant plural	3	7.5
Iterative/frequentative	2	5.0
Iterative	1	2.5
Peripheral pluractional functions	**5**	**12.5**
Continuative	2	5.0
Iterative/event internal plural/continuative	1	2.5
Frequentative/habitual	1	2.5
Habitual	1	2.5
Total	**40**	**100**

combined with a habitual or generic imperfective reading) account for only 38.3% (80 of 209) of the instances of *-pödï*. Outside of the core functions, neither language utilizes the pluractional heavily for marking the more lexical function of event internal plurality or the more aspectual function of continuativity. This leaves as the greatest difference between the two the frequency with which the pluractional marks the most grammatical of these functions, that is, the habitual and generic imperfective: these are barely attested in Kari'nja, whereas they account for fully 60.3% (126 of 209) of the uses of the pluractional in Akawaio.

From this count of the distribution, we can create a semantic map of the distribution of the functions of *-potï* in Kari'nja, as seen in figure 4. Here, there are three different shades: the darkest reflects the single most frequent function, the spatial distributive (37.5% of all attested uses); the mid-level shading covers the remaining core pluractional functions, participant plurality, iterative, and frequentative (combined, 50% of attested uses); the lightest shading captures the functions that are much less attested (12.5% combined), event internal plurality, continuative, and habitual.

We conclude that the difference in frequency between Akawaio *-pödï* and Kari'nja *-potï* is driven by a semantic shift in Akawaio, such that the erstwhile pluractional morpheme has become a frequent marker of habitual and generic imperfective. This claim is consistent with two related assumptions from the grammaticalization literature: one is that directionality of change generally goes from more lexical and derivational functions toward more abstract and inflectional functions; the other is that inflection is generally more lexically applicable than derivation, such that grammaticalization correlates

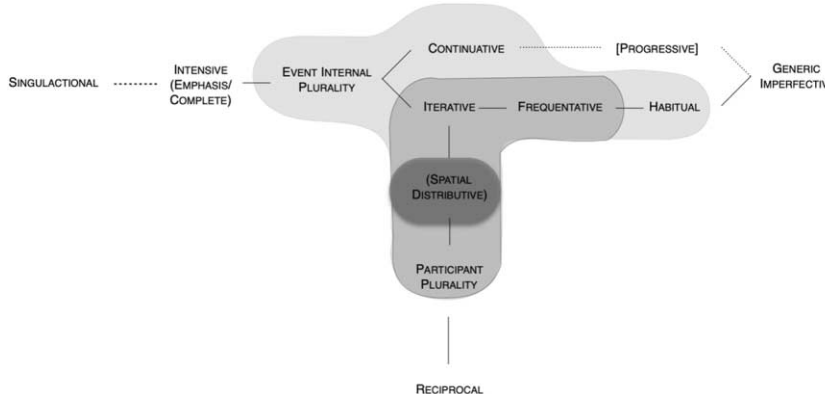

FIG. 4—Frequency-based semantic map of Kari'nja *-potï*

with increased productivity and applicability within the lexicon in the use of the more grammaticalized morpheme.[10] Of course, it is logically possible to imagine that the semantic map of the original functions of **-pëtï* was more like that of Akawaio and that the semantic map of Kari'nja represents a contraction from that formerly more ample functional distribution. However, independent reconstructions of the verbal inflectional system of Proto-Cariban (Gildea 1998, 2012, 2018) are much more similar to the verbal system of Kari'nja, including a perfective-imperfective distinction for both medial and past tenses. In contrast, the dominant verbal inflections of Akawaio are more recent reanalyses of nominalizations, in which the past tenses do not vary for aspect. In this context it is not surprising that speakers of Akawaio would expand the function of the pluractional to explicitly communicate grammatical aspectual distinctions.

Let's now give a look at other cognates of *-pödï* in two Cariban languages.[11] In Makushi (ISO code 693-3: mbc), the suffix *-pîtî* covers basically the same domain of functions as Akawaio *-pödï*. For example, *-pîtî* often gives an iterative (30), frequentative, or habitual reading (31) to the verb (Abbott 1991:118).

(30) Makushi (Abbott 1991:118)
paapa–ya yei ya'tî–**pîtî**
father–ERG tree cut–**ITER**
'Father **cuts** the tree (**repeatedly**).'

[10] Saavedra (2019) provides both a review of the grammaticalization literature and a broad empirical study using corpora of English, both of which support the correlation between increased frequency and degree of grammaticalization.

[11] The data presented in what follows are taken from grammatical descriptions, and they are therefore not strictly corpus-based.

(31) Makushi (Abbott 1991:118)
mîîkîrî i–n–koneka–'pî yapurî–**pîtî**–'pî to'–ya
3:PRO 3–OBJ:NMLZ–make–PST praise–**ITER**–PST 3:PRO:PL–ERG
'They **used to worship** that which he made.'

This functional overlapping among Akawaio and Makushi is not surprising, given that both belong to the closely related Pemóng Group inside the Venezuelan Branch.

The cognate suffix *-pëtï* in Panare (ISO code 693-3: pbh) covers a wider range of pluractional functions, including iterative/continuous (32), frequentative/habitual (33), and also participant plurality (34).

(32) Panare (Payne and Payne 2013:185)
Pata–n y–ákama–**pëtï**–mpëj mën ano.
foot–POSS TR–DI.worsen–**ITER**–IPFV.T IN.INVIS dirt
'The dirt **keeps making** my foot **worse**.'

(33) Panare (Payne and Payne 2013:185)
kën t–pa–**pëtï**–i yu.
AN.INVIS 1SG.A–feed–**ITER**–PPERF2 1SG
'**I used to feed** him/her.'

(34) Panare (Payne and Payne 2013:185)
Y–ankë–**pëtï**–ta' ñaj.
3–take–**ITER**–IMP.MVMT there
'Go **take them**.'

While Panare does not belong to the Pemóng Group, it is still within the Venezuelan Branch and therefore more closely related to Akawaio than the remaining languages we discuss here.

7. Diachronic and geographic considerations. As noted in **6**, most Cariban languages seem to mark pluractional situations directly in the verb. However, they do so by means of at least three different morphological constructions (cognates of Akawaio *-pödï* and Arara *-tke*, and reduplication), which cover many of the same functions as *-pödï* in Akawaio. Alongside these three constructions, some well-described languages appear to have no pluractional morpheme, and others have not yet been described in sufficient detail to allow confirmation of the presence or absence of such a morpheme.

Several interesting observations follow from the survey of pluractionality in the Cariban family, which we map onto both recent classifications of the Cariban family (table 5 below) and the geographic distribution of the Cariban family (fig. 5 below). First, the clear absence of pluractional verbal morphology is associated with two of the most genetically isolated languages and groups in

the family, those that have not been linked with other groups/languages into larger branches within the family—Parukotoan and Upper Xingu Carib (cf. table 5). Meira, Hoff, and Gildea (2010) argue on the basis of ablaut phenomena that the Parukotoan languages represent the first branch to be separated from the rest of the Cariban languages. While descriptions of Yukpa (ISO code 693-3: yup) remain preliminary (especially in the absence of text collections), if further studies show similar lack of pluractional morphology, then the languages lacking pluractional will be those that appear, at least based on current phonological reconstructions, to be "outsiders" of the larger family. If it can be confirmed that none of these languages has a specific morphological device that encodes pluractionality, this will then suggest that the pluractional markers in other Cariban languages are a later phenomenon, which arose after the separation of Parukotoan, Kuikuro (ISO code 693-3: kui), and perhaps Yukpa.

Second, one of the three morphological strategies, the suffix *-tke*, is attested only in the Arara-Ikpéng Group of the Pekodian Branch. It is glossed as 'ITERATIVE' by Alves (2017:106–8) and it covers the following pluractional functions: iterativity (35), participant plurality (36), frequentativity (37), and habituality (38).[12]

(35) Arara (Carol Alves p.c.)
ugon carro erengmy–**tke**–nangry
man car hit–**ITER**–IPFV
'The man is hitting the car **several times**.'

(36) Arara (Alves 2017:108)
jei amtem poda=p kun–wo–**tke**
wood house inside=ATBZ 3.RM.PST–kill–**ITER**
aturãu Karaja–mkeni
cattle Karaja–deceased
'The late Karaja **killed many cattle** in the wood house.'

(37) Arara (Carol Alves p.c.)
y–bage–dup kafe j–okpe–**tke**–nangry
1S_O–wake_up–SBJ coffee 1A–make–**ITER**–IPFV
'When I wake up, I **make** coffee.'

(38) Arara (Carol Alves p.c.)
opty–me–**tke**–ni
medicine–VBZ–**ITER**–NOM
'Shaman' (the person who **habitually** gives medicine)

[12] Alves (2017:106–8) gives a brief description of this morpheme, from which we have taken one of the examples here. We thank her for sharing the other examples with us in personal correspondence.

The presence in Arara of a suppletive allomorph *-taadamy* is the kind of irregularity that suggests an older morphological distinction; however, the large size of the suppletive allomorph (three full syllables) and the presence of *-tke* in only these two closely related languages suggests a much more recent development. For now, we leave the question open, hoping in future research either to identify a non-pluractional source morpheme for these suffixes (which would indicate relative youth) or a reflex of one (or both) of them as pluractional in a more distantly related language (which would indicate relative age).

Third, two different formal strategies of reduplication have been identified both in the Taranoan Group (represented by Tiriyó, ISO code 693-3: tir) and Wayana (ISO code 693-3: way) of the Guianan Branch, plus Apalaí and Waimirí-Atroarí (ISO code 693-3: atr), two languages that have yet to be classified into a larger branch (cf. table 5).

(39) Wayana (adapted from Tavares 2005:264)
Mule nuikanuika.
mule **nujka**~n–ujka–Ø
child **PLAC1**~3S_O–defecate–REC.PST

'A child (with diarrhea) defecated here, stopped, defecated there again, then stopped, then again . . .' (*continuously defecating, without stopping).

(40) Wayana (adapted from Tavares 2005:265)
Wapkëlëkëlë.
w–apkëlë~**këlë**–Ø
1A3O–break.O~**PLAC4**–REC.PST

'I broke it in small pieces.'

(41) Tiriyó (Meira 1999:536)
Ti–**nta**ntaka–e
RM.PST–**red**:break–RM.PST

'They broke many bits off (his bow).'

(42) Tiriyó (Meira 1999:36)
wekarama 'I gave' → ***weka***–*wekarama*
'I gave many times'
maitëne 'you pushed it' → ***mai***–*maitëne*
'You pushed many times'
wenpae 'I am teaching it' → ***wee***–*wenpae*
'I keep teaching it'

The apparent absence of a close genetic connection between these languages, coupled with the irregularity of the reduplication pattern (all four languages appear to have both internal and external reduplication), suggest relative antiquity. However, the relative proximity of all these languages in the southern portion of the Guiana Plateau (cf. fig. 5) suggests the possibility of contact. In

modern times, Apalaí is found exclusively with Wayana in mixed-ethnicity villages, and it is common to find speakers of Tiriyó and Wayana in each other's villages. On the other hand, Waimirí-Atroarí is spoken some distance to the west, and there is no suggestion of modern contact with any of the other three languages. While we have no ready solution to this conundrum, we do point out two other items of geographical interest that might fuel speculation. Most relevant is that the three Parukotoan languages that are found between the languages with pluractional reduplication might represent a more recent arrival, which could have broken up formerly more continuous peoples (see Frikel's 1970 reconstruction of the ancient migration of the Katxuyana to their current homelands). Less probable, but still conceivable, is that when the Taranoan language Karihona (ISO code 693-3: cbd; a sister to Tiriyó) migrated westward to Colombia (within the last 500–800 years; Meira 2000: 130), they might have spent a period in contact with Waimirí-Atroarí during the passage.

In contrast, the most widespread form, **-pëtï*, is found throughout the Venezuelan Branch, in two adjacent languages, Kari'nja and Ye'kwana (ISO code 693-3: mch), and in preliminary data, quite possibly in Waimirí-Atroarí (the only language to show evidence of two distinct pluractional strategies). In his initial proposal for the existence of the Venezuelan Branch, Gildea (2003) pointed out that both Kari'nja and Ye'kwana are found in the geographic vicinity of the Venezuelan Branch and that each has at least one or two of the morphological properties that point to the other members as belonging to a distinct genetic unit. However, Mattéi Muller (2003) argues convincingly that Kari'nja does not belong with the larger unit, whereas Cáceres (2011) finds that Ye'kwana actually contains several more of the "Venezuelan" patterns beyond those identified in Gildea (2003), and in Matter's (2021:47) conservative classification of the family, he places Ye'kwana within the Venezuelan Branch. The consistent presence of a modern reflex of **-pëtï* was not one of the criteria identified by Gildea (2003); the current study suggests that it should be added to the list. Doing so would contribute additional weight to the hypothesis that Ye'kwana belongs in the Venezuelan Branch while adding one more grammatical property to Kari'nja that will require explanation in the event that it is not classified into Venezuelan. Our knowledge of Waimirí-Atroarí is not sufficient to place it in any other genetic unit, but at the least it is adjacent to the southern boundary of the more hegemonic Venezuelan Branch (fig. 5).

In table 5 we present the results of a preliminary survey mapped onto Matter's (2021:47) conservative classification of the Cariban family.

In figure 5, the results of the same classification are shown geographically in a map indicating the locations where the languages are currently spoken (created with lingtreemaps Matter 2022).

The geographic distribution of pluractionality largely mirrors the genetic distribution, but it also drives home the relative geographic homogeneity of

TABLE 5

PLURACTIONAL MARKING IN GENETIC UNITS OF THE CARIBAN FAMILY

Parukotoan:	No pluractional
Pekodian:	
Bakairi	No pluractional attested (limited descriptions)
Arara-Ikpéng	*-tke*
Taranoan:	
Tiriyó	REDUPLICATION
Karihona, Akuriyó	No pluractional attested (limited descriptions)
Wayana	REDUPLICATION
Apalaí	REDUPLICATION
Waimiri-Atroari	REDUPLICATION / **-pëtï* (limited descriptions)
Kari'nja	**-pëtï*
Venezuelan:	
Ye'kwana	**-pëtï*
Pemóng Group	**-pëtï*
Panare	**-pëtï*
Tamanaku	**-pëtï*
Yawarana, Mapoyo	**-pëtï*
Upper Xingu Carib:	No pluractional
Yukpa	No pluractional attested (limited descriptions)

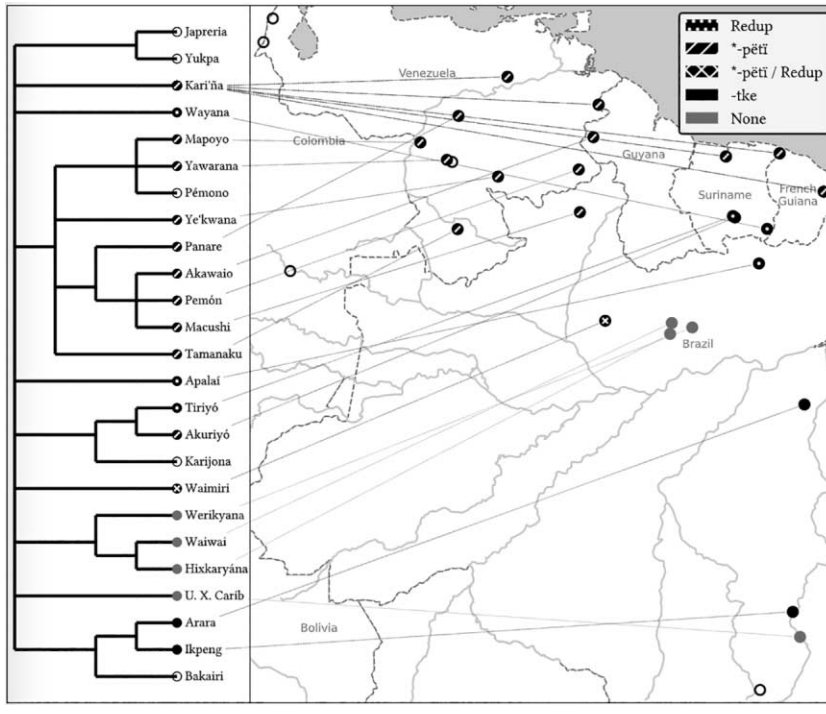

FIG. 5—Geographical distribution of Cariban pluractional markers

each pluractional morpheme. The most widespread morpheme, **-pëtï* is mainly found in Venezuela, where languages of the Venezuelan Branch surround both Ye'kwana and Kari'nja, just north of Waimirí-Atroarí. It is also found in the western Guiana Plateau, in the Pemóng Group (which includes Akawaio), and the farthest extensions to the east all come from the geographic expansion of the Kari'nja language. The two languages that contain the morpheme *-tke* are not only closely related genetically but are geographically adjacent, and three of the four languages with reduplication, Tiriyó, Wayana, and Apalaí, are clearly more tightly bound geographically than genetically, with Waimirí-Atroarí somewhat more distant but still in a larger area of plausible historical contact. In contrast, when we consider the languages that clearly do not have a pluractional morpheme, what stands out is the lack of geographic contiguity: Parukotoan in the South of the Guiana Plateau and Kuikuro (Upper Xingu Carib Group) to the far south; pending further research, we might also add Yukpa, to the far west of Venezuela. Once again, this distribution is consistent with the hypothesis that pluractional morphology was not a feature of Proto-Cariban but that it developed independently in three different genetic and/or geographical clusters.

8. Conclusions. At its most basic level, this paper provides a synchronic analysis of the marker *-pödï* in Akawaio, showing that it is better described as a pluractional rather than with the gloss 'ITERATIVE' offered in the preliminary description from Caesar-Fox (2003). Looking at Caesar-Fox's corpus of texts, we have constructed a semantic map of pluractional functions served by this marker, which includes both the core and the additional functions generally ascribed to pluractional markers. Looking more deeply at the pluractional functions that are not frequently served by *-pödï*, we identify well-established alternative markers for these functions, most in the periphery of the conceptual space (e.g., progressive, reciprocal derivations, and emphatic particles). These markers in some way seem to limit the functional domain of *-pödï* to a semantic core that perfectly overlaps with the semantics usually conveyed by pluractionality. This semantic analysis contributes to the synchronic description of Cariban languages, and it also constitutes a starting point for future investigation of PMs in Akawaio and other Cariban languages that hopefully will be based on more extensive corpus data and will also benefit from elicitation to clarify ambiguous readings. At the same time, this work also provides an important case study from which future typological studies of the pluractional can take advantage.

In addition to the more traditional descriptive-typological methodology, we take a step into the more innovative domain of discourse typology. That is, we map not only the existence of the multiple related functions of *-pödï*, but we also pay attention to the frequency of these functions. From this, we learn that,

although Akawaio *-pödï* does serve most of the core pluractional functions, these do not in fact constitute the most frequent uses. Rather, it appears that the Akawaio pluractional marker is following an ongoing path of grammaticalization, shifting its functional domain from the left portion of the semantic map, functions usually expressed cross-linguistically by less grammatical strategies, toward those on the right of the space, cross-linguistically encoded by highly grammatical strategies. In particular, *-pödï* is used with very high frequency to express habituality, a function almost unattested for the cognate suffix in related language Kari'nja. In addition, the low corpus frequency of *-pödï* for encoding some of the other pluractional functions can be explained by the presence of competing strategies, that is, other grammatical devices that express these meanings, such as the continuative auxiliary *ko'mamï* and the plural absolutive suffix *-gong*.

Finally, we briefly survey the Cariban family of languages to see how they encode the pluractional function. This survey shows us not only that *-pödï* is a pluractional in Akawaio but that cognates to *-pödï* constitute the most widely attested pluractional strategy in the Cariban family. Such cognates appear to constitute another possible criterion for inclusion in the Venezuelan Branch of the Cariban family, suggesting either possible inclusion in the branch or else areal influence for Kari'nja and Ye'kwana, two other Cariban languages spoken in the same area. Based on these cognate forms, we can reconstruct a proto-suffix **-pëtï* to at least the Venezuelan Branch of the Cariban family. Two other pluractional markers are found in other Cariban languages: one the suffix *-tke*, limited to closely related and geographically adjacent languages Arara and Ikpéng; the other is reduplication, found in neighboring but not so closely related languages Apalaí, Tiriyó, and Wayana. Interestingly, we do not find pluractional markers in the groups that are thought to have separated earliest from Proto-Cariban, such as the Parukotoan Group and Upper Xingu Carib. This suggests that all three Cariban pluractional markers are relatively late innovations, each limited to specific genetic units and/or geographic areas.

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