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Explaining the antipassive-causative syncretism in Mocoví (Guaycuruan)

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Among the polyfunctional valency markers, an antipassive-causative marker is a rather typologically unusual grammatical feature. This paper tries to explain the antipassive-causative syncretism in Mocoví, a Guaycuruan language spoken in northeastern Argentina, by examining the synchronic functions and the diachronic formation of the valency modifier *-agan*. We propose that both *-agan* antipassive and causative concentrate on the subject activity and involve the backgrounding of a core argument. These two functions, which are traceable to the formation of *-agan* from the state/change-of-state nominalizer *-aga* and the transitive verbalizer *-n*, work in tandem with the syntactic constraint of having only two core arguments per derived and non-derived transitive clauses, which crucially allows for the *-agan* reanalysis from causative to antipassive.

Keywords: syncretism, antipassive, causative, origin, evolution, Mocoví

1. Introduction

Mocoví, a Guaycuruan language spoken in northeastern Argentina, exhibits a theoretically and typologically relevant antipassive-causative syncretism encoded by the valency modifier *-agan*. This functionally and typologically oriented paper aims to explain such a cross-linguistically unusual syncretism by examining the synchronic functions and the diachronic formation of this valency modifier.^{1,2}

1. The division of labour between the authors was as follows. The data from Mocoví were collected by Cristian Juárez in 2011–2018. Both authors equally participated in the analysis and typological interpretation of the data and writing of the text. This division of labour explains why the order of authors is non-alphabetical.

2. We are grateful to several Mocoví native speakers from Colonia Aborigin, specially Ramón Tomás, Daniel Ventura, Héctor José, Nieves José, Nanci and Lidia Olivas. A special thanks goes to Zarina Estrada Fernández, Spike Gildea and Denis Creissels for their comments on preliminary versions of this paper. We would also like to thank two anonymous reviewers and the editors of

We first argue that the antipassive and causative functions of *-agan* are connected by the shared semantic properties and the syntactic constraint on the number of core arguments per derived and non-derived transitive clauses, i.e. the NP density control (Song 1991, 1996). The valency modifier highlights the predicate activity by focusing on the subject argument that performs this activity and implies a backgrounding process with regards to the base construction. The NP density control constraint does not allow morphological causatives to be formed from a transitive base construction; thus transitive predicates first need to be intransitivized by *-agan* in order to be *-agan* causativized.

We propose then that the two opposite valency-changing functions of *-agan* actually reflect the function and origin of its components. In this paper, we show that *-agan* results from the combination of the state/change-of-state nominalizer *-aga* and the verbalizer *-n*. The categorical change from verb to noun removes the verb argument structure, and *-n* verbalization gives the previously nominalized predicate a transitive argument structure. The function of *-n* as a transitive verbalizer is due to its verbal origin in an activity verb like ‘make’; this reconstruction is strongly supported by Guaycuruan comparative data and reconstruction works on Proto-Guaycurú. Once the sequence *-aga* ‘NMLZ’ + *-n* ‘VBLZ’ was reanalyzed as a single unit, it began to function as a causative marker for derived and non-derived intransitive predicates. Then, *-agan* was reanalyzed as an antipassive marker for derived and non-derived transitive predicates. This syncretism was favored by the semantic motivations that causative and antipassive share and by the structural constraint on creating morphological causatives from transitive verbs. This explanation of the formation and evolution of Mocoví *-agan* is consistent with that of valency-changing markers in other unrelated languages and expands our knowledge on the possible sources of antipassive and causative markers.

The structure of the paper is as follows: Section 2 provides background information on Mocoví and the Guaycuruan language family, as well as on the main morphosyntactic properties of nominal and verbal phrases, and transitivity issues. Section 3 examines the synchronic functions of *-agan* as an antipassive and a causative marker. The formation of the valency marker and the possible evolution that gave rise to the antipassive-causative syncretism are discussed in Section 4. Section 5 presents some cross-linguistic data from languages in which antipassive and causative markers are argued to have originated from a similar derivational process to what is proposed for Mocoví. The main outcomes of this study and further research questions are provided in Section 6.

this volume for their valuable comments. We would lastly like to thank the Universidad de Sonora (UNISON) and The University of Texas at Austin for having sponsored the research leading to this paper. Any remaining errors are our own responsibility.

2. Linguistic family and typological profile of Mocoví

2.1 Guaycuruan family and Mocoví data

Mocoví belongs to the Guaycuruan language family. In addition to Mocoví, this family includes five other languages: †Mbayá, Kadiwéu, †Abipón, Toba and Pilagá. According to Fabre (2006), Guaycuruan languages are grouped into two different branches, i.e. Northern and Southern Guaycurú. The Northern Guaycurú branch includes Kadiwéu and the extinct language †Mbayá, which are from the Southern Brasil area. The Southern Guaycurú branch includes Mocoví, Toba, Pilagá and the extinct language †Abipón, from the northeastern Argentina area. Mocoví is spoken in the Argentinian provinces of Santa Fe and Chaco. Most of the Mocoví data in this paper come from Colonia Aborigen Mocoví, spoken in the northernmost Mocoví community of Chaco.

Mocoví data in this paper include both elicited and naturally occurring sentences, which were collected during fieldwork in Colonia Aborigen from 2011 to 2018. This material is complemented, as needed, with data from previous descriptions of the language (e.g. Buckwalter 1995; Grondona 1998; Gualdieri 1998; Carrió 2009, 2015a,b). We also consider data from other Guaycuruan languages, drawing on the published and unpublished work currently available. References are given as necessary.

2.2 Nominal and verbal phrases

The following subsections set out the morphosyntactic properties that will be relevant for understanding the nominal and verbal phrases in Mocoví. We first deal with the encoding of nominal phrases. We then address the encoding of core arguments, as well as the morphological properties associated with predicate transitivity.

2.2.1 Nouns and nominal phrases

In Mocoví, as well as in the other Guaycuruan languages, nouns and nominal phrases are commonly defined by two complementary morphosyntactic properties. First, nouns are preceded by determiners,³ and second, bound person forms encode the possessor of the possessed noun, as in (1).

- (1) a. *so l-qeʔla so pyoq*
 DET 3POSS.I-ear DET dog
 ‘the dog’s ear’

3. Determiners are *ka* ‘absent, non-visible’, *na* ‘present, coming’, *so* ‘present, going’, *ra* ‘present, standing (vertically extended)’, *ni* ‘present, sitting (non-extended)’, *ji* ‘present, lying (horizontally extended)’ (see Grondona 1998 and Gualdieri 1998 for further details).

The presence of a determiner before a noun is not an obligatory property to define a nominal phrase since determiners are omitted under certain circumstances. In elicitation, for instance, nouns can be uttered without any determiner, which does not lead to ungrammaticality. Also, referential properties of nouns seem to trigger determiner omission. For instance, the omission of determiners in antipassive clauses implies nominal indefiniteness (see Section 3.1).

As mentioned above, another distinctive morphological property of Mocoví nominals and nominal-like units is the possessor marking. There are two different bound form paradigms, Set I and Set II, which encode the possessor's person and number in the possessed noun (see Table 1). According to Gualdieri (1998: 132) and Grondona (1998: 65–66), these two sets roughly divide inalienable and alienable possession, based primarily on the obligatory vs. optional possession expression. In obligatorily possessed nouns, the possessor is expressed with a Set I form, while in optionally possessed nouns a Set II form is used. The semantic distinction between obligatorily and optionally possessed nouns also serves to differentiate types of possessive relationships, but not in a discrete way. For example, body parts, kinship, and some man-made object nouns mostly occur with Set I, but a reduced number of the same class of nouns also occurs with Set II. The Set II forms, moreover, apply to nouns that are undoubtedly part of the alienable domain, for example, nature elements (e.g. 'stick'), which can be both possessed or unpossessed.

Table 1. Mocoví possessor bound forms⁴

	SET I	SET II
1SG	<i>i-</i>	<i>ñ-</i>
2SG	<i>qad-...-ir</i>	<i>r-...-ir</i>
3SG	<i>l-</i>	<i>n-</i>
1PL	<i>qod-</i>	<i>qar-</i>
2PL	<i>qad-...-i ~i:</i>	<i>r-...-i</i>
3PL	<i>l-...-r</i>	<i>n- ...-r</i>
INDEFINITE	<i>n-</i>	

4. The motivation for the split in possession marking of Set I is not yet clear and deserves further exploration; however this topic is beyond the scope of this paper. The reader is referred to Gualdieri (1998: 144) where she briefly states a working hypothesis on this issue.

Examples of the possession marking for each set of bound forms are given below in (2) and (3).

- (2) Set I (‘Inalienable’)
- a. *i-taʔa*
1POSS.I-father
‘my father’
 - b. *l-taʔa*
3POSS.I-father
‘his/her father’
- (3) Set II (‘Alienable’)
- a. *qopag*
tree/stick
‘stick, tree’
 - b. *ñ-qopag*
1POSS.II-tree/stick
‘my wood’

A relevant distinction to this work in the possessor marking is the contrast between *l-* and *n-* within Set I for 3rd person referents. The use of each of these possessor markers impacts on the referentiality of the possessor, as shown in (4). A referential 3rd person singular possessor is encoded with *l-*, as in (4a, 4c, 4e), but a non-referential, less definite possessor is encoded by the prefix *n-*, as in (4b, 4d, 4f).

- (4) Definite vs. non-definite possessor expression from Set I
- a. *l-wor*
3POSS.I-family
‘his/her family’
 - b. *n-wor*
IND.POSS.I-family
‘someone’s family’/ ‘relative’
 - c. *l-ya:le-Ø*
3POSS.I-descendant-F
‘his/her daughter’
 - d. *n-ya:le-Ø*
IND.POSS.I-descendant-F
‘someone’s daughter’
 - e. *l-pelad*
3POSS.I-shoe
‘his/her shoe’
 - f. *n-pelad*
IND.POSS.I-shoe
‘someone’s shoe’ / ‘shoe’
- (adapted from Gualdieri 1998: 138–139)

The possessor marking distinctions presented above will be relevant later when we show in Section 4.1 the extent to which nominalization affects the subject expression of intransitive predicates.

2.2.2 *Transitivity and core arguments*

This sub-section introduces the main evidence to recognize core arguments and predicates according to their transitivity. These points will be relevant to assess to what extent valency changes are reflected morphosyntactically.

Transitivity is understood here as a scalar and multifactorial notion related to semantic (i.e. semantic valency, the number of participants involved in the situation denoted by the verb) and morphosyntactic (i.e. syntactic valency, the number of arguments of the verb) properties of clauses. Of these two properties, scholars often argue that the semantic valency is the most basic and relevant property for individual language description and comparative purposes (Hopper & Thompson 1980; Kittila 2002; Næss 2007). Semantically, a highly transitive predicate requires two different participants in an asymmetric relation, commonly an agent and a patient. Such participants are argued to be inherent to the verb's semantics, which means that they cannot be omitted without any change to the grammaticality of the verb's use (see Song 2015). Based on this definition, we can differentiate between core participants – those inherently required by the situation denoted by the verb, e.g. agent and patient – and peripheral participants, those that can be optionally included in the event, providing some background information, e.g. location, instrument, time. Semantic transitivity may have a direct correlation with the syntactic transitivity, but not necessarily. That is, it might be that all core semantic participants are also syntactically obligatory. Building on this syntactic correlation, core and oblique arguments can be further distinguished.

As Thompson (1997: 61) points out, languages differ in the extent to which they distinguish core arguments. In Mocoví, this distinction is made by the combination of verbal semantics and morphosyntax. For example, a single argument predicate (S), like in (5), obligatorily indexes that argument in the verb by a bound person form, e.g. *r-*.⁵ Nominal phrases and independent pronouns are optional and help determine the referentiality and other language-specific features of the argument (e.g. presence, absence, movement and position). The independent pronoun *ramagare* in (5), for instance, indicates that the third person argument is standing (see Gualdieri 1998: 174–191 and Grondona 1998: 79–86 for a detailed explanation of the independent pronoun formation).

5. The notion of 'bound person form' is taken from Haspelmath (2013).

(5) Intransitive clause⁶*ra-magare r-tfiqo-tak*DET-magare⁶ 3INTR.I-get/be.sad-PROG

'He is getting sad.'

A two-argument predicate with one agent-like (A) and one patient-like (P) argument can be identified in Mocoví by the combination of bound person forms and independent pronouns.⁷ For example, in (6) the A argument is indexed in the verb by *s-* and the P argument *qamir* is obligatorily placed before the verb.

(6) Transitive clause

qamir s-tfag

2SG 1.II-cut

'I cut you.'

The general pattern then is that only one core argument is indexed by a bound person form in the verb, mainly the S and A arguments, i.e. the subject, (but there are some exceptions, see Juárez 2013). Like many head-marking languages (see Mithun 2003, 2005; Haspelmath 2013), bound person forms are the main expression of those core arguments in Mocoví. Their associated co-referential independent nominal or pronominal phrases are optionally used for referentiality purposes other than person, number and grammatical function. The P argument of a transitive predicate, on the other hand, is encoded by an independent pronoun or a nominal phrase. Its syntactic position depends on the grammatical person: P arguments of 1st or 2nd person precede the verb, and P arguments of 3rd person usually follow the verb as the unmarked word order. In natural speech, though, the 3rd person P argument can be left unexpressed, which does not lead to ambiguity on the grammatical person of that argument. The different positions occupied by P arguments of speech-act participants vs. non-speech-act participants resolve any potential ambiguity.

2.2.3 Bound person forms and transitivity

As mentioned in the previous section, in Mocoví, subject is indexed by bound person forms on the verb. The language has three bound person form paradigms, Set I, Set II and Set III, which express the grammatical person and number of subjects. These bound person forms are lexically and grammatically selected, which creates a complex system in which the selection of each bound person form is built on a

6. The combination of both elements denotes a third person participant. *-magare* does not occur by itself but combines with different determiners.

7. We follow Comrie (1981: 111) in taking S, A and P as "syntactic terms, whose prototypes are defined in semantic terms".

case-by-case basis. An illustration of both properties playing a role in the subject encoding is given by the selection of *r-* and *i-* for 3rd person subject referents (see Sections 3.1 and 3.2). Importantly, bound person forms are also formal means to differentiate the valency of predicates. Here we will only describe Set I and II because they are the most relevant for the discussion in this paper. The Set I bound person form paradigm is illustrated in Table 2.

Table 2. Set I bound person form paradigm

	Set I (Intransitive)
1SG	<i>dʒ-</i>
2SG	<i>r-...-ir</i>
1PL	<i>qar-</i>
2PL	<i>r-...-ir</i>
3rd	<i>n-</i>
	<i>i-</i>
	\emptyset -
	<i>r-</i>

Set I occurs mostly with intransitive predicates, and its distribution is restricted to a small semantic class involving a physically or cognitively affected subject argument. Examples of predicates following the Set I paradigm are illustrated in (9). Note that predicates are similar in encoding the 1st person subject but differ in encoding the 3rd person subject, i.e. *n-* (9b), *i-* (9d), \emptyset - (9f) and *r-* (9h).

- (9) a. *dʒ-esal*
1SG.I-vomit
'I vomit.'
- b. *n-esal*
3.I-vomit
'He/She vomits.'
- c. *dʒ-iʔlogol*
1SG.I-tremble
'I tremble.'
- d. *i-ʔlogol*
3.I-tremble
'He/She trembles.'
- e. *dʒ-qopat*
1SG.I-be.hungry
'I'm hungry.'

- f. \emptyset -*qopat*
 3.I-be.hungry
 'He/She is hungry.'
- g. *dʒ-pil*
 1SG.I-come.back
 'I'm back (here).'
- h. *r-pil*
 3INTR.I-come.back
 'He/She is back (here).'

The selection of the third person bound person form is lexically determined; this is also true for Set II illustrated below (see Juárez 2013, Chapter 4, for a more detailed analysis of the bound person forms in Mocoví). We will see that some of these intransitive bound person forms (*i-*, \emptyset - and *r-*) are formally the same as those that occur in the Set II paradigm, which shows that the distinction between the paradigms is blurred in the 3rd person.

The bound person forms of Set II are illustrated in Table 3. Unlike Set I, the Set II paradigm encodes intransitive, transitive and ditransitive subjects. The semantic range of predicates associated with Set II is much larger and more diverse than those associated with Set I.

Table 3. Set II bound person form paradigm

Set II (Intransitive/Transitive/Ditransitive)		
1SG	<i>s-</i>	
2SG		<i>-ir</i>
1PL	<i>s-</i>	<i>-G</i>
2PL		<i>-i</i>
3	<i>i-</i>	(mostly transitives)
	\emptyset -	(intransitive & transitive)
	<i>t-</i>	(only intransitives)
	<i>r-</i>	(only intransitives)

The paradigm in Table 3 shows that predicates of different valency take the same bound person form to code the 1st and 2nd person subject. Consequently, the predicate valency is not indicated by the subject morphology but instead by the argument structure of the predicate.

(10) Intransitive, Transitive and Ditransitive predicates

- a. *s-ya-we*
1.II-go-DIR:out
'I go/went to (there).'
- b. *s-tʃaG*
1.II-cut
'I cut it/him/her.'
- c. *qamir s-a:n-em a-so i-am*
2SG 1.II-give-BEN F-DET 1POSS.I-money
'I gave you my money.'

In contrast, the predicate valency in the 3rd person can be indicated by the subject morphology, since the distribution of subject bound pronouns depends partly on the predicate valency. This fact suggests then that subject bound person forms are also transitivity indicators, which is not an unusual phenomenon across languages (see Kibrik 1993). There are two prefixes that exclusively occur with intransitive predicates, *t-* and *r-*, as shown in (11). These prefixes indicate that the predicates are intrinsically intransitive. The prefix *t-* is restricted to a handful of movement verbs while *r-* occurs with a much semantically heterogenous verb class. Furthermore, the prefix *r-* is the only intransitive prefix used to indicate that a predicate has been intransitivized (see Section 3.1 below).

(11) Intransitive predicates

- a. *t-ya-we*
3INTR.II-go-DIR:out
'He/She goes to (there).'
- b. *r-alola*
3INTR.II-get/be.sick
'He/She is sick.'

The prefix *i-*, on the other hand, is not so transparent as a transitivity indicator. This prefix occurs with a very small number of intransitive predicates, as in (9d) above and (12) below, but it occurs much more frequently with transitive predicates. Juárez (2013) has observed that *i-* occurs with the largest number of transitive predicates in the language, as in (13), and it is required by predicates that undergo a transitivity process (see Section 3.2 below).

(12) Intransitive

- i-lew*
3.I-die
'He/She died.'

- (13) Transitives
- a. *i-tfaG*
3.II-cut
'He/She cut it/him/her.'
 - b. *i-lawat*
3.II-kill
'He/She killed it/him/her.'

3. The synchrony of *-agan*

The valency modifier *-agan* can either decrease or increase the verb valency, as originally reported by Gualdieri (1998). The valency decreasing is functionally associated with antipassive clauses. Antipassive clauses refer to intransitivized clauses in which the A argument of the transitive construction becomes the S argument, whereas the P argument is either encoded as an oblique or omitted (see Janic & Witzlack-Makarevich, this volume). The valency increasing is functionally associated with causative clauses. Causative clauses are understood to be derived constructions in which a new argument (the causer) is added to the base construction as an A argument and the base construction subject (the causee) is commonly reassigned as P or R argument (Dixon 2000: 31).

Although the antipassive-causative syncretism is scarcely attested across languages, such a syncretism performed by *-agan* is not new for scholars working on other Guaycuruan languages and their varieties. For example, the same antipassive-causative syncretism is found in other varieties of Toba and Mocoví (e.g. Censabella 2005, 2008; Carpio 2012; Carrió 2015a,b; González 2015). Moreover, *-agan* cognate forms performing similar functions to causative and antipassive have been reported for Guaycuruan languages such as Pilagá and Kadiwéu (Sandaló 1995; Vidal 2001).⁸ However, the analysis for the valency modifier *-agan* and its cognate forms differ from work to work, and generalizations on its evolution are still pending.

8. Vidal (2001: 166) analyzes the cognate form *-aʃan* as a 'transitivizer' in Pilagá. She states that such suffix "increase[s] the number of participants for a handful of verbs which otherwise are used intransitively". Sandaló (1995: 115) recognizes that the cognate forms *-gan*: ~ *-gen* and *-qen* derive bivalent verbs from intransitive unergative verbs in Kadiwéu.

3.1 The *-agan* antipassive

In this section we briefly introduce the basic facts on antipassives in Mocoví. In order to not repeat information from a previous publication, the reader is referred to Juárez and Álvarez González (2017), where a more detailed examination of antipassives is given.

An instance of the antipassive function of *-agan* is illustrated in (14). The de-transitivization process involves P deletion accompanied by a change in the subject bound person form from transitive to intransitive subject indexing, which resembles antipassives in ergative indexation languages (see Cooreman 1987, 1994; Givón 2001). The subject indexing change reflects that the verb valency has been reduced from bivalent to monovalent. Commonly, antipassivized predicates call for the 3rd person prefix *r-*, which is strongly associated with monovalent verb roots (see Section 2.2.3 above).

- (14) a. Transitive
so pyoq i-ta-tak so yale
 DET dog 3.II-sniff-PROG DET man
 ‘The dog is sniffing the man.’
- b. Antipassive
so pyoq r-ta-agan
 DET dog 3INTR.II-sniff-ANTIP
 ‘The dog sniffs.’

There are other instances of antipassives in which the P nominal expression is accepted but its coding differs from P nominals in typical transitive clauses (compare (14a) and (15a) with (15b)). Also, note that there is an aspectual change in the predicate that leads to a less transitive event conceptualization, e.g. the inception of the cutting event.

- (15) a. Transitive
so yale i-tʃag-tak so qopag
 DET man 3.II-cut-PROG DET firewood
 ‘The man is cutting the firewood.’
- b. Antipassive
so yale r-tʃag-agan qopag (ke-ʃi l-aʔa)
 DET man 3INTR.II-cut-ANTIP firewood OBL-DET 3POSS.I-home
 ‘The man goes to cut firewood (for his house).’

Note that in (15b) the determiner is omitted before the P nominal, which triggers a less definite reading of the NP. Mocoví antipassive clauses do not involve action completion and entail low patient affectedness. Furthermore, they commonly denote habits or customs, functions that have also been attested for antipassive in other languages as well (e.g. Zavala 1997).

3.2 The *-agan* causative

As mentioned above, the valency modifier *-agan* is also used to create causative clauses from intransitive predicates. These predicates correspond to activities in which a semantically agentive or non-agentive S argument is the subject. Although the semantic role of the intransitive subject does change, it is not a relevant variable for *-agan* causatives and certainly there is no formal motivation to argue for different types of causatives (e.g. indirect vs. direct causatives (Shibatani & Pardeshi 2002)). The generalization then is that *-agan* causatives correspond to caused intransitive activities.

An example of a causative clause derived from an intransitive clause with an agentive subject is given in (16b). The causative clause includes two agentive participants as A and P and an overlapped temporal distance between the causing and caused events.

- (16) a. *nogot-oki? Ø-lip-tak*
 boy-DIM.M 3-suck-PROG
 ‘The baby is sucking.’ (Gualdieri 1998: 265)
- b. *ka n-ate?e i-lip-agan ka l-ya:le-k*
 DET IND.POSS.I-mother 3.II-suck-CAUS DET 3POSS.I-descendant-MASC
 ‘The mother suckles her son.’

In (16b) the causativized predicate increases its valency from one to two arguments. A new causer participant is added as the A argument, which triggers the former S argument (the causee) to be expressed as the P of the derived causative clause. Changes in transitivity are also reflected in the subject encoding; the intransitive predicate takes \emptyset - and the causativized predicate calls for *i-*, the most typical transitive subject prefix for the 3rd person in Mocoví, as mentioned in Section 2.2.3.

The valency marker *-agan* also causativizes non-agentive intransitive predicates, as shown in (17). As in (16b), the causativization increases the valency from one to two arguments. Changes in the grammatical functions of the core arguments are the same as in the causatives of agentive intransitive predicates described above. Notice that the argument increase is also reflected in the subject prefix. The intransitive predicate encodes the third person subject with the prefix *r-*, but the causativized predicate requires the prefix *i-*.

- (17) a. *so qopag r-da-tak sawagat so nonot*
 DET tree 3INTR.II-move-PROG because DET wind
 ‘The tree is moving because of the wind.’
- b. *so nonot i-da-agan-tak so qopag*
 DET wind 3.II-move-CAUS-PROG DET tree
 ‘The wind is moving the tree.’

To sum up, the increase of valency in causative clauses is structurally marked by the addition of a new causer argument and a change in the subject encoding. Barring a few exceptions, the common indexing pattern is that causativized predicates require the transitive bound person form *i-* for the third person subject.

3.3 The *-agan-agan* combination: *Antipassive + causative*

So far, we have shown that the valency marker *-agan* can create either antipassive or causative clauses, depending on the transitivity of the verb root. In this section, we show that *-agan* can apply twice to transitive roots in order to create antipassive and causative clauses. The order in which these meanings apply, i.e. first antipassive and then causative, indicates that the language imposes a syntactic restriction on the number of core argument per clause. This implies the existence of the NP density control constraint (Song 1991, 1996), a key morphosyntactic constraint for understanding the syncretism between antipassive and causative in Mocoví.

Consider the examples in (18), where antipassive and causative derivations are formed from the transitive verb *-alat* ‘leave’.

- (18) a. Transitive
so yale i-alat a-so l-wa
 DET man 3.II-leave F-DET 3.POSS.I-partner
 ‘The man left/abandoned his wife.’
- b. Antipassive
so yale r-alat-agan
 DET man 3.INTR.II-leave-ANTIP
 ‘The man divorced.’
- c. Antipassive + P noun phrase
 **so yale r-alat-agan a-so l-wa*
 DET man 3.INTR.II-leave-ANTIP F-DET 3.POSS.I-partner
 ‘The man divorced his wife.’ / ‘The man left/abandoned his wife.’
- d. Causative
so l-taʔa i-alat-agan-agan l-ya:le-Ø
 DET 3.POSS.I-father 3.II-leave-ANTIP-CAUS 3.POSS.I-descendant-F
 ‘His father made his daughter divorce.’

In (18b) we see that *-agan* applies to the transitive root and creates an antipassive clause which does not accept the former transitive P argument, as shown in (18c). Once the antipassive clause is formed, the stem *-alatagan* is a new agentive intransitive verb base. As such, it is now available to build a causative clause, like any other non-derived intransitive activity predicates in the language. Building on the examples in (18), one may also predict then those transitive predicates that are *agan*-antipassivized will tolerate *-agan* causativization as well.

One may wonder though why transitive predicates cannot be directly *agan*-causativized without being first *agan*-antipassivized. We propose that Mocoví imposes a systemic restriction on the number of core arguments allowed per clause. This structural restriction is known as NP density control and has been argued for other languages across the world. This term was coined by Song (1991, 1996) and refers to a structural restriction that keeps the number of core NP arguments in the morphological causative sentence from exceeding the maximum number of core arguments allowed by any typical non-causative (transitive) sentence. In Mocoví, NP density appears to be restricted to no more than two core arguments per transitive (or causative) clause. Building on this structural restriction, it is logically evident why the morphological causativization of transitive predicates is not available. The morphological causativization of transitive predicates would result in ditransitive clauses with two core non-subject arguments, which would exceed the allowed number of core arguments.

The NP density control constraint in combination with the two functions of *-agan*, antipassive and causative, lets us understand cases like (19). We can correctly predict that an *-agan* causative clause cannot be created from a transitive predicate, as in (19b). In order to use *-agan* as a causative marker with transitive roots, the roots must be first intransitivized via *-agan* antipassivization, as in (19c). As we proposed above, this antipassivization process creates a new stem that is interpreted as any non-derived intransitive root ready to be *-agan* causativized.

The restriction on the number of arguments per clause and the P demotion from the previous *-agan* antipassivization prevent from the creation of a transitive clause with more than two core arguments, e.g. subject and object. This also explains why the object of the formerly transitive root cannot be expressed as a core argument anymore. If we want to express it, two morphosyntactic strategies are available. One strategy is to express the patient NP as part of a new transitive predicate, which creates a complex sentence with two predicates, as shown in (19d). Another option is to express the former P argument as an oblique, as illustrated in (19e).

- (19) a. Transitive
so yale Ø-lapon-tak na lete
 DET man 3.II-pile-PROG DET trash
 ‘The man is piling up the trash.’
- b. Ungrammatical Causative
 **so yale Ø-lapon-agan-tak na lete so qar-qaya*
 DET man 3.II-pile-CAUS-PROG DET trash DET 1PL.POSS.I-brother
 ‘The man made our brother pile up the trash.’

- c. Antipassive
so yale Ø-lapon-agan-tak ke-na lete
 DET man 3.II-pile-ANTIP-PROG OBL-DET trash
 ‘The man is piling up the trash.’
- d. Causative from intransitive (antipassive)
so yale Ø-lapon-agan-agan so qar-qaya Ø-lapon
 DET man 3.II-pile-ANTIP-CAUS DET 1PL.POSS.I-brother 3-pile
na lete
 DET trash
 ‘The man made our brother pile up, he piles up the trash.’
- e. Causative from intransitive (antipassive)
so ñaʔko yim Ø-lapon-agan-agan ke-na lete
 DET 1POSS.boss 1SG 3.II-pile-ANTIP-CAUS OBL-DET trash
 ‘My boss made me pile up the trash.’

A reviewer pointed out that the NP density control constraint and whether a language can form causatives from transitive predicates are not directly related issues. The reviewer argued that one can imagine a language where causatives could be created on a transitive base, but still result in the transitive form by just leaving out the original patient in the causative. We agree with this comment, and the reviewer’s point could have been valid if we did not have evidence to support the assertion that transitive predicates cannot be directly causativized by *-agan* no matter what criteria are considered. The only options available in the language are those presented above in (19). Thus, transitive predicates cannot be directly *-agan* causativized. Furthermore, the Mocoví valency modification, where transitive predicates must first be intransitivized (e.g. by antipassive) before causativization applies to them, is not unique to this language, and has been attested elsewhere. The exact same system is also found in Mandinka, a Mande language from the Western branch (see Creissels 2015). Other examples are provided by Song (1996: 184–191), who illustrated the same phenomenon in Blackfoot (Algonquian), Halkomelem (Salishan) and Bandjalang (Australian).

Table 4 summarizes the valency modifications that have just been described for the suffix *-agan*. Three generalizations can be drawn from Table 4. First, the two different interpretations, i.e. antipassive or causative, associated with the suffix *-agan*, depend on the base construction (which also confirms Gualdieri’s 1998 findings). Antipassivization derives an intransitive activity predicate from a transitive one. Causativization, on the other hand, derives transitive predicates from both *-agan* derived and non-derived intransitive predicates which also belong to the semantic class of activities. Second, the antipassive-causative syncretism can be explained by structural and semantic motivations. Structurally, the NP density control constraint rules out the causative formation on transitive predicates since it would create transitive sentences that would exceed the two core arguments allowed per

Table 4. Valency-changing operations associated with *-agan* suffixation

Base construction	Derived construction	Valency modifying
Transitive A P	Antipassive S	De-transitivization (valency -1) P demotion (deleted or oblique-marked) A → S
Intransitive (non-derived and <i>-agan</i> derived) S	Causative A P	Transitivization (valency +1) A introduction S → P

transitive and transitive-like clauses. Semantically, the valency modifier *-agan* can be viewed as a general activity marker that highlights both the activity expressed by the base verb and the subject argument that is responsible for it. Such functions imply that the derived constructions are also associated with a backgrounding process with regards to the base construction. The P argument is demoted (deleted or oblique-marked) in the antipassive, and the S argument changes to P in the causative. Patient demotion in antipassives and causer subject introduction in causatives represent two different ways of highlighting the activity performed by the subject participant. Lastly, the antipassive-causative syncretism of *-agan* illustrates another case of “ambivalent voice”, i.e. the use of the same marker for two seemingly opposite valency functions (Malchukov, 2016, 2017). In his recent papers, Malchukov presents cases in which polysemic markers are associated with two opposite valency modifications, but the causative-antipassive polysemy is not mentioned. Mocoví thus represents a new type of polysemy, showing that the same marker can derive antipassive and causative constructions.

3.4 Other intransitive causativizers: *-agat* and *-agat-it*

As argued in Sections 3.1–3.3, the valency modifier *-agan* is largely associated with predicates or stems that denote activities. This is one of the properties that *agan*-modified predicates have in common. This section provides more evidence in favor of the semantic type constraint that the *-agan* valency modifier has. We show that non-activity predicates are causativized by two other different causative constructions, *-agat* and *-agat-it*, rather than *-agan*.⁹ We also show that those

9. The sequence /-agat-it/ is the underlying form. Such sequence surfaces as [qatʃit] which results from a morphological and phonological conditioning. The morphological conditioning establishes that the suffix *-agat* appears as [-qat] when another derivational-like morpheme follows it, e.g. *-it* ‘CAUSEE’ or *-agan* ‘ANTIP’. The phonological change [t] → [tʃ] is due to the palatalization process of alveolar consonants before the high vowel [i] in Mocoví.

causativized predicates acquire an activity aspectual reading when they are *-agan* antipassivized.

Besides *-agan* causatives, two other morphological causative constructions exist in Mocoví. One type of causative clause involves the causativizer *-agat* and is built on semantically diverse intransitive roots, as shown in (20). Juárez (2017) has recently showed that *-agat* causativized roots denote age, value, color terms, speed, physical properties, human propensity, and entity-specific change-of-state and breaking verbs (Beavers et al. 2017; Beavers & Koontz-Garboden 2020). Furthermore, *-agat* causatives involve a causee argument that may or may not be animate, which largely depends on the context of use. The caused event denotes a non-reversible state, which correlates with high affectedness of the causee argument.

- (20) Causative: *-agat*
- a. Intransitive
a-ñi n-qaganagki i-ter
 F-DET 3POSS.II-chair 3.I-get/be.old¹⁰
 ‘His/her chair is old.’
 - b. Causative
raʔa:sa l-awag i-ter-agat a-ñi n-qaganagki
 sun 3POSS-brightness 3.II-get/be.old-CAUS F-DET 3POSS.II-chair
 ‘The sun’s brightness ruined his/her chair.’

Another type of causative clause is encoded by the obligatory combination *-agat-it*, where *-agat* encodes the causing event and *-it* encodes the causee argument. The *-agat-it* causatives are constrained by the type of intransitive predicate on which they are built and by the semantic properties of the subject. This type of causative calls for intransitive stative/change-of-state predicates involving an animate subject whose semantic role is experiencer-like, as in (21). Furthermore, this type of causative clause requires that the caused event is a reversible or momentary state.

- (21) Causative: *-agat-it*
- a. Intransitive
so i-aqaya r-alola
 DET 1POSS.I-brother 3INTR.II-get/be.sick
 ‘My brother is sick.’
 - b. Causative
so wagayag i-alola-agat-it so yale
 DET water 3.II-get/be.sick-CAUS-CAUSEE DET man
 ‘The water made the man sick.’

10. In Mocoví, the aspectual difference between state and change-of-state is not marked morphologically and thus the same root supports both stative and change-of-state interpretations. We provide these two interpretations separated by a slash ‘/’ symbol for each verb.

Having shown the two other types of morphological causativization in Mocoví, we turn now to evidence showing that each type of these causative clauses can be antipassivized by *-agan*. The morphological and semantic changes that *-agan* triggers on those causativized predicates are the same as those presented earlier in Section 3.1. The antipassivization of *-agat* causativized predicates deletes the causee argument from the argument structure, and the causer corresponds to the intransitive subject of the antipassivized predicate. The subject is then encoded by the intransitive bound person form *r-*, and the antipassivized predicate is interpreted as an activity, i.e. a durative, unbounded and dynamic event. Compare the examples in (22).

- (22) a. *i-awig*
3.I-get.burn
'He/she/it gets burn.'
- b. *i-awig-agat*
3.II-get.burn-CAUS
'He/she/it burns him/her/it.'
- c. *r-awig-agat-agan*
3INTR.II-get.burn-CAUS-ANTIP
'He/she burns.'

Likewise, *-agat-it* causativized predicates can also be antipassivized by *-agan*. Antipassivization triggers changes in the morphological encoding of the causer and causee. The causee marking *-it* is deleted by the *-agan* antipassivizer, which is an additional proof of the valency reduction, and the causer subject is encoded by the 3rd person intransitive bound person form *r-*, as in (23c).

- (23) a. *i-sot*
3.I-get/be.tired
'He/she is tired.'
- b. *i-sot-agat-it*
3.II-get/be.tired-CAUS-CAUSEE
'He/she tired him/her.'
- c. *r-sot-agat-agan*
3INTR.II-get/be.tired-CAUS-ANTIP
'He/she/it causes tiredness.' (from Buckwalter 1995: 173)

As seen above, antipassivization and causativization can be combined in two different ways in Mocoví. Non-active intransitive verbs must first be causativized via *-agat* in order to be antipassivized via *-agan*. Active transitive verbs, on the other hand, are first antipassivized by *-agan* in order to be causativized by *-agan*. The former voice combination results in an antipassive construction from the antipassivization of an *-agat* derived causative. The latter voice combination results in a causative construction from the causativization of an *-agan* derived antipassive.

4. The *-agan* formation and its evolution

In this section, we deal with the formation of the valency modifier *-agan*, which explains the synchronic functions that have been described above in Section 3. We propose that *-agan* comes from a double derivation in which the nominalizer suffix *-aga* is combined with the verbalizer suffix *-n*, as shown in (24).

- (24) Mocoví *-agan* valency modifier formation
 NOMINALIZATION *-aga* + VERBALIZATION *-n* > ANTIPASSIVE *-agan*
 > CAUSATIVE *-agan*

This analysis of *-agan* formation is supported by Mocoví internal data as well as comparative data from other Guaycuruan languages. In Sections 4.1. and 4.2 we first present the individual functions of *-aga* and *-n*. We then turn to the morphosyntactic scenario that might have given rise to such a verbal marker and its plausible evolution in Section 4.3. Lastly, Section 5 complements our analysis by looking at studies that have also argued for the creation of antipassive voice markers via double derivation, namely nominalization + verbalization, from other unrelated languages across the world (Fortescue 1996; Fortescue Jacobson & Kaplan 2010; Creissels 2012; Jacques 2014).

4.1 The nominalizer *-aga*

Let us first start with the function of the suffix *-aga* in Mocoví. This suffix turns an intransitive verb into a noun. The intransitive base verb is commonly a state/change-of-state verb, as in (25a) and (26a). The *-aga* nominalizations in (25b) and (26b) thus correspond to a state/change-of-state nominalization.

- (25) a. *ayim s-alola*
 1SG 1.II-get/be.sick
 'I'm sick.'
 b. *ayim we ra i-alola-aga*
 1SG EXIST DET 1POSS.I-get/be.sick-NMLZ
 'I'm sick.' (Lit. 'I have/exist my sickness.')
- (26) a. *i-aneg-se-k r-oya:pi*
 1POSS.I-plant-NOML.CL-M 3INTR.II-wilt
 'My sowing wilted.'
 b. *walog l-oya:pi-aga*
 cotton 3POSS.I-wilt-NMLZ
 'the wilting of cotton'

The examples in (25) and (26) show that the *-aga* nominalization changes the encoding of the participant involved in the state/change-of-state denoted by the base verb. For example, in (25a) the 1st person participant is encoded by the verbal bound person form *s-*, while in (25b) it is encoded by the nominal bound person form *i-*. This change in the encoding of the single participant of the intransitive base verb from subject to possessor is another indication that the base verb has been nominalized. The nominal status of the derived unit is also supported in (25b) by the presence of the nominal determiner *ra* before the *-aga* nominalization. Furthermore, the nominalized predicate acquires the typical nominal function as the possessed argument in possessive constructions with the existential *?we*. Lastly, note that *-aga* nominals can also occur as the head of a nominal phrase, as in (26b).

As mentioned at the beginning of this section, *-aga* nominalizes only intransitive predicates. This property of *-aga* has also been noticed in previous work on the language. Gualdieri (1998: 150–152), for example, provided a short list of *aga*-nominalized roots in which all verbs are intransitives. Some examples are listed in (27)–(29).¹¹

- (27) a. *ayim s-saʎi*
1SG 1.II-get/be.heavy/slow
'I'm heavy, slow.'
- b. *i-saʎi-aga*
1POSS.I-get/be.heavy/slow-NMLZ
'my weight' (adapted from Gualdieri 1998: 151)
- (28) a. *r-qopi*
3INTR.II-get/be hurt
'He/she hurts himself/herself.'
- b. *l-qopi-aga*
3POSS.I-get/be.hurt-NMLZ
'his/her wound.' (adapted from Gualdieri 1998: 151)
- (29) a. *so lawa r-afiwi*
DET soil 3INTR.II-get/be.dry
'The soil is dry.'
- b. *n-afiwi-aga*
IND.POSS.I-get/be.dry-NMLZ
'the drought.' (adapted from Gualdieri 1998: 151)

11. The verbal examples come from Juárez's fieldwork and nominalization examples come from Gualdieri (1998).

These examples reinforce the pattern observed before with regards to the semantic type of *-aga* nominalized predicates. The nominalized intransitive base verbs are part of the state/change-of-state class. Furthermore, we see that *-aga* nominalization requires the original participant of the intransitive base verb to be encoded as the possessor not as the intransitive subject. This modified encoding of the possessor is obligatory and thus must be expressed even when the possessor is unknown or less referential. In the latter case, the possessor is encoded by the indefinite possessor marker *n-*, as in (29b).

The general pattern then is that *-aga* nominalization is constrained by the transitivity (i.e. intransitive) and the semantic class (i.e. state/change-of-state) of the predicates with which it occurs. Another important point is that *-aga* nominalizations obligatorily entail a single participant, which changes from subject to possessor in the nominal creation process.

4.2 The verbalizer *-n* and its verbal source

Let us turn now to the analysis of the suffix *-n*. Synchronic data suggest that *-n* might be traced back to a verbal source associated with the meaning ‘make’, which over the time has been reanalyzed as a denominal verbalizer in Mocoví. Evidence from Mocoví and other Guaycuruan languages (specifically Chaco Toba, Western Formosa Toba and Pilagá) points in this direction. We first introduce the function of *-n* in Mocoví and then discuss its use in other Guaycuruan languages.

In Mocoví, the suffix *-n* is used as a verbalizer that creates transitive verbs from nouns or noun-like roots. In all the following examples, the (b) example shows the presence of two arguments, confirming that the denominal verb created via *-n* suffixation is transitive. These transitive verbs can be created from prototypical nouns, as in (30)–(31), as well as from roots that convey nominal and adverbial meanings, as in (32).

- (30) a. *l-otawa*
 3POSS.I-helper
 ‘his/her helper’
 b. *so i-taʔa i-otawa-n so i-aqaya*
 DET 1POSS.I-father 3.II-helper-VBLZ DET 1POSS.I-brother
 ‘My father helped my brother.’
- (31) a. *n-atar*
 IND.POSS.I-medicine
 ‘someone’s medicine’ or ‘medicine’

- b. *yim n-atar-n*
 1SG 3.III-medicine-VBLZ
 'He/she cured me.'
- (32) a. *lapo*
 pile
 'pile/a lot of' (Buckwalter 1995: 37)
- b. *so yale Ø-lapo-n-tak na lete*
 DET man 3.II-pile-VBLZ-PROG DET trash
 'The man is piling up the trash.'

To our knowledge, Mocoví does not currently have a formally related independent verb meaning 'make' or 'do', which might lead us to believe that the verbalizer actually comes from a verb. The current Mocoví verb for 'make' is *-oʔwet*, as in *i-oʔwet l-oler* (3.II-make 3POSS.I-fire) 'He/she makes fire', which corresponds to the entry *yo'uet* 'He/she makes it' in Buckwalter's (1995: 228) Mocoví vocabulary. However, data from other Guaycuruan languages support the development of *-n* in Mocoví from an independent verb of action, e.g. 'make' or 'do', which have become a verbalizer suffix in this language but not in all other Guaycuruan languages.

In Chaco Toba, the closest Guaycuruan language to Mocoví spoken in Chaco, we find the suffix *-n* functioning as a verbalizer but also as a causativizer. The use of the suffix *-n* as a verbalizer that creates transitive verbs from nominal bases in Chaco Toba is illustrated in (33) from Censabella (2008). The verbalizer use of *-n* in Chaco Toba is identical to its use in Mocoví, as shown in (30)–(32) above.

- (33) Chaco Toba (Censabella 2008: 108)
- a. *na-pishi*
 IND.POSS-cloth.strainer
 'somebody's strainer'
- b. *na-pishi-n*
 3MID-cloth.strainer-VBLZ
 'He filters it.'

However, unlike in Mocoví, the suffix *-n* is also used in Chaco Toba with verbal bases as a causativizer. Censabella (2008: 107) has reported the suffix *-n* as a direct causation marker that occurs with what she calls active and inactive intransitive roots, as in (34) and (35).

- (34) Chaco Toba (adapted from Censabella 2008: 107)
- a. *r-alemata*
3IA-angry
'He is angry.'
 - b. *y-alemata-n*
3IA-angry-CAUS
'He angers (him/her).'
- (35) Chaco Toba (adapted from Censabella 2008: 107)
- a. *r-koʔo*
3IA-give.birth
'She gives birth.'
 - b. *i-koʔo-n*
3T-give.birth-CAUS
'He/she rears (him/her).'

Clearly, the difference between the use of *-n* as a verbalizer (33) or as a causativizer (34)–(35) depends on the base to which the suffix is attached. If *-n* is attached to a noun, it creates a transitive verb having a causative meaning 'cause/make X', i.e. an action causing to be/do X, where X is the base noun. But if *-n* is attached to a verb, it functions as a causativizer increasing the valency of the intransitive base verb by adding a new causer participant as the subject. Unlike Chaco Toba, the suffix *-n* does not function as a causativizer in Mocoví as it does not attach directly to verbal bases in this language. Despite their differences, all uses of the suffix *-n* in Mocoví and in Chaco Toba clearly share a causative meaning, and this meaning may be due to the morpheme's origin as an independent verb of action 'make' or 'do'. Stronger evidence to this point comes from the northernmost Guaycuruan languages in Argentina.

In Western Formosa Toba, for example, we find the verb *-en* 'make', which is formally similar to the suffix *-n* in Mocoví and Chaco Toba. Carpio (2012) has reported that *-en* functions as the main verb of periphrastic causative constructions, as illustrated in (36) and (37). The verb *-en* 'make' introduces the causing event, which can be followed by either an intransitive (36) or transitive (37) predicate, denoting the caused event.

- (36) Western Formosa Toba (Carpio 2012: 141)
- a. *'niyaq qa'qata*
fish dry
'The fish dries.'
 - b. *'daʔ-me Ø-en qa'qata 'niyaq*
DSTN-ENDOP 3.I-make dry fish
'He makes the fish dry.' / 'He dried the fish.'

- (37) Western Formosa Toba (Carpio 2012: 141)
- a. *ñi nogoto'le-k y-awana ha? 'awto*
 DSIT girl-M 3I-find DGNG.F car
 'The boy found the car.'
- b. *ha-ñi?-me l-at?e Ø-en y-awa'na ha? 'awto*
 F-DSIT-ENDOP 3POSS.INAL-mother 3I-make 3-find DGNG.F car
 'The mother made (him/her?) find the car.'¹²

Like Western Formosa Toba, Pilagá, another Guaycuruan language spoken in Formosa, also has the verb *-en* 'make', which can be part of periphrastic causative constructions as well. According to Vidal (2001: 362–364), the causative verb *-en* in Pilagá creates causative clauses from intransitive and transitive predicates, i.e. the caused event can be either intransitive or transitive as in (38)–(39).

- (38) Pilagá (adapted from Vidal 2001: 362)
- a. *p'e na' nogop*
 hot CLF.PROX water
 'The water is hot.'
- b. *María Ø-en p'e na' nogop*
 María setA.3-make hot CLF.PROX water
 'María made the water hot.' (= María boiled the water)
- (39) Pilagá (adapted from Vidal 2001: 363–364)
- a. *awa-lema-tay-a so' ad-wa*
 SETA.2-get.angry-ASP-OBJ.SG CLF POSS.2-fellow/spouse
 'You got angry at your fellow (or spouse).'
- b. *s-'en awa-lema-tay-a so' ad-wa*
 setA.1-make setA.2-get.angry-ASP-OBJ.SG CLF POSS.2-fellow/spouse
 'I made you get angry at your fellow (or spouse).'

Based on the data presented above, we can confidently argue that the Mocoví verbalizer *-n* comes from an independent verb with the meaning of 'make'. Besides the synchronic data we just described, our claim also finds support from reconstruction works on Proto-Guaycurú. Some previous works have proposed proto-forms for the verb 'make', which show similarities to the synchronic use in some Guaycuruan languages like Western Toba and Pilagá. For example, Ceria and Sandalo (1995) have reconstructed the form in (40) for Proto-Guaycurú.

12. The parenthesis for the translation of this example was added. Carpio does not include the subject of the caused event (that is, the causee) in her translation and did not mention if it is possible to have it with causativized transitive events. This might suggest the presence of the NP density control in this Toba variety as well.

Once the two functions of *-agan* are part of Mocoví grammar, the distinction between antipassive and causative is made based on the base verb: if the base verb is intransitive, the derived *-agan* construction is causative; if the base verb is transitive, the derived *-agan* construction is antipassive. The syncretism between causative and antipassive is now established.

5. The origin of causative and antipassive markers beyond Mocoví

Our proposal for the development of the valency modifier *-agan* in Mocoví is also supported by studies that have addressed the origin of causative and antipassive markers in other languages. This section summarizes the main arguments from some of these studies.

First of all, it is well known, mainly from studies on grammaticalization, that the activity verb ‘make, do’ is a common origin of causative markers (Heine & Kuteva 2002: 117–118, Section 4.2). Although cross-linguistically less common, ‘make’ or ‘do’ verbs have also been attested as sources of antipassive markers.

Scholars have reported that antipassive markers can come from the grammaticalization of antipassive periphrases having the verb ‘make’ or ‘get’ (Fortescue 1996; Fortescue et al. 2010; Creissels 2012). Creissels (2012), for instance, argues that the antipassive suffix *-ndi* in Soninke (West Mande) comes etymologically from the verb **tin* ‘do’. He proposed that the context of grammaticalization was an antipassive construction comparable to French periphrasis *faire des achats* (‘do shopping’, lit. ‘do some buying’) where the verb *faire* ‘do’ is combined with an action nominalization from the transitive verb *acheter* (‘buy’). West Greenlandic antipassive markers originated from the same type of construction as in Soninke but their formation was relatively more elaborate. Fortescue et al. (2010) have shown that West Greenlandic has three antipassive affixes (*-(s)i-*, *-nnig-* and *-llet-*) that are derived by combining nominalizing or participial suffixes with three different verbal bound stems meaning ‘make, become’ (Fortescue et al. 2010: 438, 447), ‘get’ (Fortescue et al. 2010: 457, 459) and ‘provide with’ (Fortescue et al. 2010: 442, 451, 459), respectively.

More recently, Jacques (2014) has argued for a related pathway of grammaticalization for the antipassive markers in Japhug Rgyalrong (Sino-Tibetan, China). He has shown that the combination of an action nominalizer and a verbalizing marker can be the mechanism for creating not only antipassive but also causative and applicative markers. This previously unreported origin of voice markers shows that voice markers can be formed through double derivation, as illustrated in (46). Specifically, this double derivation includes the nominalization of a verb and then a denominal derivation, which changes the nominalized stem into a verb.

(46) NOMINALIZATION + DENOMINAL DERIVATION > VOICE DERIVATION

The two derivational processes that have created the antipassive marker and the applicative/causative marker in Japhug are as in (47) and (48).

(47) ACTION NOMINALIZATION of transitive verb + INTRANSITIVE DENOMINAL DERIVATION > ANTIPASSIVE

(48) ACTION NOMINALIZATION of intransitive verb + TRANSITIVE DENOMINAL DERIVATION > APPLICATIVE/CAUSATIVE

In the combination in (47), a transitive verb is first nominalized into an action nominal, and this action nominal is then turned into a verb by a denominal construction deriving intransitive verbs. The resulting marker (historically, nominalizer + verbalizer) functions then as an antipassive marker. In the combination in (48), an intransitive verb is first nominalized into an action nominal, and the action nominal is then turned into a verb by a denominal construction deriving transitive verbs. The resulting marker functions as a causative or applicative marker. As Jacques (2014: 22) pointed out, “the reason for this derivation in two steps is that action nominalization first neutralizes the original transitivity of the verb root, and a new transitivity value is allocated by a specific denominal derivation.” So, what has been proposed by Jacques (2014: 21) is that “languages with rich denominal derivation systems have the possibility of creating new voice markers by combining the appropriate nominalized form with a denominal marker”.

The formation of the Mocoví valency modifier *-agan* fits well into this background of voice marker development. The salient property of Mocoví *-agan* is that the same marker serves as both a causative and antipassive marker, and that a single origin can be argued for it. This evolution is logical when the semantic and structural properties in which *-agan* is used are considered. The valency marker began as a composite suffix that was first reanalyzed as a single unit and then used as a causative marker of intransitive verbs. The syntactic restriction on the number of core arguments per clause ruled out the possibility of having a morphological causative derived from a transitive base verb. Consequently, the extension from causative to antipassive was allowed and favored by the two shared semantic features, i.e. the activity of the subject and the argument backgrounding process with regards to the base construction.

6. Conclusions

In this article, we have proposed an explanation for the antipassive-causative syncretism morphologically marked by the valency modifier *-agan* in Mocoví. Both *-agan* synchronic functions were explained by looking at the *-agan* formation and its plausible evolution that gave rise to such a syncretism.

We have claimed that both *-agan* antipassive and causative concentrate on the subject activity and involve the backgrounding of an argument. Antipassives are built on non-derived and derived transitive (i.e. derived by the *-agat* causative) predicates and involve a P argument that is either deleted or oblique-marked. As a consequence of antipassivization, *-agan* derived predicates denote events that are seen as unbounded, durative and dynamic (i.e. activities). Causatives, on the other hand, are built on non-derived and *agan*-derived intransitive clauses and involve the addition of a new A argument with the consequent backgrounding of the original S argument to P. Like antipassives, *-agan* causatives denote caused activities. The shared components between antipassives and causatives work in tandem with the syntactic constraint of having only two core arguments per derived and non-derived transitive clauses.

The semantics associated with *-agan* and its double functionality can be logically explained by considering the elements that are part of it, i.e. *-aga* and *-n*. Like other valency changing markers across languages (e.g. passives, causatives and applicatives), the Mocoví *-agan* originated from a double derivation involving the *-aga* state/change-of-state nominalization and the *-n* transitive verbalization afterwards. The *-aga* nominalization, exclusively related to intransitive predicates, creates a nominal constituent entailing a single participant. The *-n* verbalizer, which comes from an activity verb ‘make’ or ‘do’, provides a transitive argument structure to the previously nominalized predicate. It introduces a new A argument and causes the nominalization participant to be interpreted as the causee of a causative construction. Because the language imposes a constraint on the number of core arguments per transitive clause, the antipassive reanalysis is possible based on the features shared by the antipassive and the causative.

This study has interesting implications regarding Mocoví description and the typology of syncretic valency markers. In future work on Mocoví, it is worth exploring whether the causative marker *-agat* also comes from a double derivation, i.e. *-aga* + *-t*, as has been argued for *-agan*, and if the unit *-t* also has a verbal origin. With regards to typology, the antipassive-causative syncretism of *-agan* expands our understanding of “ambivalent voice markers” recently proposed by Malchukov (2016, 2017), by showing that the same marker can perform antipassive and causative functions, as *-agan* does.

Abbreviations and symbols

The glosses follow the Leipzig Glossing Rules, additional abbreviations are as follows:

I	Set I bound person form	IA	agentive intransitive event
AGT	agentive	IPOSS	indeterminate possessor
ALN	alienable	LEX	lexical
CAUSEE	causee argument	MID	middle
CL	class	NOML	nominal
DIM	diminutive	POSS	possessor
DPA	demonstrative ‘standing’	RG	restricted group
ENDOP	endophoric	SIT	sitting
EXST	existential	VBLZ	verbalizer
GNG	going	VM	valency modifier
HORIZ	horizontal		

References

- Beavers, John, Everdell, Michael, Jerro, Kyle, Kauhanen, Henri, Koontz-Garboden, Andrew, LeBovidge, Elise & Nichols, Stephen. 2017. Two types of states: A cross-linguistic study of change-of-state verb roots. Paper presented at 91st Meeting of the Linguistic Society of America, 5–8 January, Austin, Texas.
- Beavers, John & Koontz-Garboden, Andrew. 2020. *The Roots of Verbal Meaning*. Oxford: OUP. <https://doi.org/10.1093/oso/9780198855781.001.0001>
- Buckwalter, Alberto. 1995. *Vocabulario Mocovi*. Elkhart: Mennonite Board of Missions.
- Carpio, María Belén. 2012. *Fonología y morfosintaxis de la lengua hablada por grupos tobas en el oeste de Formosa (Argentina)*. Munich: Lincom.
- Carrió, Cintia. 2009. *Mirada generativa a la lengua mocoví (familia Guaycurú)*. Ph.D. dissertation, Universidad Nacional de Córdoba.
- Carrió, Cintia. 2015a. Alternancias verbales en mocoví (familia guaycurú, Argentina). *Linguística* 31(2): 9–26.
- Carrió, Cintia. 2015b. Construcciones causativas y anticausativas en Mocoví. *LIAMES* 15(1): 69–89.
- Censabella, Marisa. 2005. Nominalización deverbativa en toba. *Anclajes* 9: 189–211.
- Censabella, Marisa. 2008. Derivación causativa en toba. In *Studies in Voice and Transitivity*, Zarina Estrada-Fernández, Soren Wichmann, Claudine Chamoreau & Albert Álvarez-González (eds), 103–123. Hermosillo: Universidad de Sonora.
- Ceria, Verónica G. & Sandalo, Filomena. 1995. A preliminary reconstruction of proto-Waikurúan with special reference to pronominals and demonstratives. *Anthropological Linguistics* 37(2): 169–191.
- Comrie, Bernard. 1981. *Language Universals and Linguistic Typology. Syntax and Morphology*. Chicago IL: The University of Chicago Press.
- Cooreman, Ann M. 1987. *Transitivity and Discourse Continuity in Chamorro Narratives*. Berlin: Mouton de Gruyter. <https://doi.org/10.1515/9783110851014>

- Cooreman, Ann M. 1994. A functional typology of antipassives. In *Voice. Form and Function* [Typological Studies in Language 27], Barbara Fox & Paul Hopper (eds), 49–88. Amsterdam: John Benjamins. <https://doi.org/10.1075/tsl.27.05coo>
- Creissels, Denis. 2012. The origin of antipassive markers in West Mande languages. Paper presented at the 45th Annual Meeting of the Societas Linguistica Europaea, Stockholm, 29 August–1 September.
- Creissels, Denis. 2015. Valency properties of Mandinka verbs. In *Valency Classes in the World's Languages: A Comparative Handbook*, Vol. 1, Andrej L. Malchukov & Bernard Comrie (eds), 221–259. Berlin: Mouton de Gruyter.
- Dixon, R. M. W. 2000. A typology of causatives: Form, syntax and meaning. In *Changing Valency: Case Studies in Transitivity*, R. M. W. Dixon & Alexandra Y. Aikhenvald (eds), 30–79. Cambridge: CUP. <https://doi.org/10.1017/CBO9780511627750.003>
- Fabre, Alain. 2006. Los guaykurú. *Suplemento Antropológico* 41(22): 7–132.
- Fortescue, Michael. 1996. West Greenlandic half-transitive affixes in a diachronic perspective. In *Cultural and Social Research in Greenland 95/96. Essays in Honour of Robert Petersen*, Birgitte Jacobsen (ed.), 34–44. Nuuk: Ilisimatusarfik/Atuakkiorfik.
- Fortescue, Michael, Jacobson, Steven & Kaplan, Lawrence. 2010. *Comparative Eskimo Dictionary, with Aleut Cognates*. Fairbanks AK: Alaska Native Language Center.
- Givón, Talmy. 2001. *Syntax. An Introduction*, Vol. II. Amsterdam: John Benjamins.
- González, Raúl Eduardo. 2015. *Estudio fonológico y morfosintáctico de la lengua toba hablada en el este de la provincia de Formosa (Argentina)*. Munich: Lincom.
- Grondona, Verónica María. 1998. A Grammar of Mocovi. PhD dissertation, University of Pittsburgh. <https://doi.org/10.16953/deusbed.74839>
- Gualdieri, Cecilia Beatriz. 1998. Mocovi (guaicuru): Fonología e morfossintaxe. PhD dissertation, Universidade Estadual de Campinas.
- Haspelmath, Martin. 2013. Argument indexing: A conceptual framework for the syntactic status of bound person forms. In *Languages across Boundaries. Studies in Memory of Anna Siewierska*, Dik Bakker & Martin Haspelmath (eds), 197–226. Berlin: Mouton de Gruyter. <https://doi.org/10.1515/9783110331127.197>
- Heine, Bernd & Kuteva, Tania. 2002. *World Lexicon of Grammaticalization*. Cambridge: CUP. <https://doi.org/10.1017/CBO9780511613463>
- Hopper, Paul & Thompson, Sandra A. 1980. Transitivity in grammar and discourse. *Language* 56(2): 251–299. [https://doi.org/10.1016/S0024-3841\(02\)00163-8](https://doi.org/10.1016/S0024-3841(02)00163-8)
- Jacques, Guillaume. 2014. Denominal affixes as sources of antipassive markers in Japhug Rgyalrong. *Lingua* 138: 1–22. <https://doi.org/10.1016/j.lingua.2013.09.011>
- Juárez, Cristian. 2017. Types of direct causativization in Mocovi (Guaycuruan, Argentina). Paper presented at the Workshop on American Indigenous Languages (WAIL), 12–13 May, Santa Barbara CA.
- Juárez, Cristian & Álvarez González, Albert. 2017. The antipassive marking in Mocovi: Forms and functions. In *Verb Valency Changes: Theoretical and Typological Perspectives* [Typological Studies in Language 120], Albert Álvarez González & Ía Navarro (eds), 227–254. Amsterdam: John Benjamins. <https://doi.org/10.1075/ijcl.18.1.09gri>
- Janic, Katarzyna & Alena Witzlack-Makarevich. 2021. The multifaceted nature of antipassive constructions. In *Antipassive: Typology, Diachrony, and Related Constructions* [Typological Studies in Language 130], Katarzyna Janic & Alena Witzlack-Makarevich (eds). Amsterdam: John Benjamins. (This volume). <https://doi.org/10.1075/tsl.130.01jan>

- Kibrik, Andrej A. 1993. Transitivity increase in Athabaskan languages. In *Causatives and Transitivity* [Studies in Language Companion Series 23], Bernard Comrie & Maria Polinsky (eds), 47–67. Amsterdam: John Benjamins. <https://doi.org/10.1075/slcs.23.03kib>
- Kittila, Seppo. 2002. *Transitivity. Towards a comprehensive typology*. Turku: Abo Akademis Trickery.
- Malchukov, Andrej L. 2016. “Ambivalent voice”: Markedness effects in valency change. In *Transitivity and Valency Alternations. Studies on Japanese and Beyond*, Taro Kageyama & Wesley M. Jacobsen (eds), 389–422. Berlin: De Gruyter Mouton. <https://doi.org/10.1515/9783110477153-014>
- Malchukov, Andrej L. 2017. Markedness effects in applicative formation. In *Verb Valency Changes: Theoretical and Typological Perspectives* [Typological Studies in Language 120], Albert Álvarez González & Ía Navarro (eds), 1–25. Amsterdam: John Benjamins. <https://doi.org/10.1075/tsl.120.01mal>
- Mithun, Marianne. 2003. Pronouns and agreement: The information status of pronominal affixes. *Transactions of the Philological Society* 101(2): 235–278. <https://doi.org/10.1111/1467-968X.00119>
- Mithun, Marianne. 2005. Beyond the core: Typological variation in the identification of participants. *International Journal of American Linguistics* 71(4): 445–472. <https://doi.org/10.1086/501247>
- Næss, Åshild. 2007. *Prototypical Transitivity* [Typological Studies in Language 72]. Amsterdam: John Benjamins. <https://doi.org/10.1075/tsl.72>
- Sandalo, Maria Filomena. 1995. A Grammar of Kadiwéu. PhD dissertation, University of Pittsburgh.
- Shibatani, Masayoshi & Pardeshi, Prashant. 2002. The causative continuum. In *The Grammar of Causation and Interpersonal Manipulation* [Typological Studies in Language 48] Masayoshi Shibatani (ed.), 85–126. Amsterdam: John Benjamins. <https://doi.org/10.1075/tsl.48.07shi>
- Song, Jae Jung. 1991. Causatives and universal grammar: An alternative interpretation. *Transactions of the Philological Society* 89(1): 65–94. <https://doi.org/10.1111/j.1467-968X.1974.tb01155.x>
- Song, Jae Jung. 1996. *Causatives and Causation. A Universal-Typological Perspective*. London: Longman.
- Song, Jae Jung. 2015. Valency and argument structure. In *International Encyclopedia of the Social and Behavioral Sciences*, 2nd edn, Vol. 25, James D. Wright (ed.), 1–6. Amsterdam: Elsevier. <https://doi.org/10.1016/B978-0-08-097086-8.52045-5>
- Thompson, Sandra. 1997. Discourse motivations for the core-oblique distinction as a language universal. In *Directions in Functional Linguistics*, [Studies in Language Companion Series 36], Akio Kamio (ed.), 59–82. Amsterdam: John Benjamins. <https://doi.org/10.1075/slcs.36>
- Vidal, Alejandra. 2001. Pilagá Grammar (Guaycuruan Family, Argentina). PhD Dissertation, University of Oregon. <https://doi.org/10.16953/deusbed.74839>
- Viegas Barros, J. Pedro. 2013. *Proto-Guaicurú. Una reconstrucción fonológica, léxica y morfológica*. Munich: Lincom.
- Zavala, Roberto. 1997. Functional analysis of akatek voice constructions. *International Journal of American Linguistics* 63(4): 439–741. <https://doi.org/10.1086/466340>

