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11 Contact-induced diffusion of applicatives in northwestern Amazonia?

Abstract: This paper surveys applicative constructions in the northwest Amazon and adjacent Andean slopes. Previous research suggests that this area may feature contact-induced diffusion of valency markers, specifically applicatives, across family boundaries. On closer scrutiny, however, there seems to be no firm basis for this conclusion. First of all, applicatives do not seem to be overly common in the area: many languages do not have applicatives, and those that do often have no more than one (with a few notable exceptions). Second, although some commonalities can be observed between the applicative constructions across the area, they involve common features of applicative constructions anywhere, like suffixed applicative markers, and a preponderance of benefactive or sometimes malefactive semantics. To a lesser extent, comitative-related semantics are found. There is some overlap in form, but these seem to be largely coincidental. A possible exception is a connection between Arabela (Zaparoan) and Yagua (Peba-Yaguan), which do show signs of non-accidental similarities. In addition, there are some intriguing but inconclusive functional similarities between Shiwilu (Kawapanan) and some of the Arawakan languages of central Peru, outside the northwest Amazon.

1 Introduction

South America, in particular in western Amazonia, displays dazzling linguistic diversity, especially in terms of the abundance of genealogical units. At the same time, grammatical traits are shared across genealogical boundaries (see e.g. Derbyshire 1987; Doris L. Payne 1990; David L. Payne 1990; Dixon and Aikhenvald 1999; Campbell 2012; Aikhenvald 2012 for overviews based on increasing amounts of information). Some of these lists of shared features include valency-changing morphology, including applicative morphology. For instance, Doris L. Payne (1990) discusses applicatives as one of the salient features in her chapter on widespread morphological characteristics of Amazonian languages. David L. Payne (1990), an overview of widespread forms in Amazonian languages, mentions valency-changing markers: causative affix *mV*, a causative verbal prefix *V-*, and a form *ka*, which is associated with different functions, among them valency-changing (mainly causative, also including denominal verbs in Arawa-

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kan). Aikhenvald (2012) also highlights that applicatives are common in Amazonia, and that the commonality of comitative and instrumental applicatives is a specifically Amazonian trait. She also mentions that applicatives and causatives are intertwined, and connected through the notion of togetherness, which links one common feature of Amazonia, sociative causatives (Guillaume and Rose 2010) and comitative applicatives. All of this suggests that valency-increasing constructions are prone to contact-induced diffusion in the Amazon, and that the distinction between applicatives and causatives may be weak.

These conclusions seem to be echoed in some of the literature on the languages of the north-west Amazon (henceforth NWA), a highly diverse area, with much evidence to suggest intense (historical) intercultural contact (see e.g. Sorensen 1967; Aikhenvald 2002; Epps and Stenzel 2013; Seifart 2015; Chacon 2017). Payne (1985b) discusses verbal markers in Pebá-Yaguan and Zaparoan languages, which indicate, among other functions, that the direct object should be interpreted as an instrument or accompanying object. The case for a connection between these families was made in Payne (1984), and assessed as possibly genetic in nature. Although Payne (1985b) does not commit fully to interpreting the nature of the shared *-ta* forms, she regards a shared retention as plausible. To date, there is no consensus for a genetic link between Pebá-Yaguan and Zaparoan, so contact-induced diffusion should still be considered a distinct possibility (especially in the light that it was only tentatively discarded by Payne). Wise (1999, 2002), discussing a number of northern Peruvian languages, mentions that valency-changing suffixes that include the consonant *t* are common, and that, in addition to Zaparoan and Pebá-Yaguan languages, similar markers are found in Cahuapanan and Witotoan languages, although these are less clearly applicative in nature, and more towards the causative end of the continuum. Wise (2002) also connects a causative marker present in some central Peruvian Arawakan languages of a similar form *-ta/-da* and a transitivizing and verbalizing suffix which includes *-t-*. She tentatively concludes that this is an areal feature, spread through contact. She does not commit to stating the extent of this areal feature, whether it is northwestern Amazonian, western Amazonian, or maybe even a more widespread distribution. Picking up the open questions with respect to the areal extent of *-ta* marked valency-increasing suffixes, Crevels and Voort (2020) identify two epicenters of valency markers with or including the form *-ta*, one in the southwestern Amazon and one in the northwestern Amazon. In the latter area, they identify applicative suffixes of the form *-tV* in Sikuani (Guahiban), Yagua, as well as in languages from the Chicham, Kawapanan, and Zaparoan families, and causative suffixes of similar forms in some Arawakan languages, as well as in Muniche (isolate), Kokama-Kokamilla (Tupí-Guaraní), and Witoto (Witotoan).

The spread of forms is somewhat unexpected for the area. Most of what we know about the NWA complies with the idea of function (pattern) borrowing, combined with low levels of form (in particular lexical) borrowing. In many cases, it is the functional or meaning component that is shared across languages rather than the form. This particular pattern, found in several areas across Amazonia (Epps and Michael 2017) is argued

by Epps (2020), based on earlier work by Londoño Sulkin (2012, 2017), to be related to a “the Amazonian package”—a loosely shared system in which identity preservation in the form of language maintenance and in some cases purism in a historical context of widespread bilingualism and inter-group dependency—and plays an important role in shaping the patterns of grammatical convergence in combination with relatively low degrees of formal diffusion we find today. Uncharacteristically for this area, then, it is the form that seems to have spread, while the functions of these *ta*-markers, although they center around the concept of valency increase (and sometimes decrease), seem somewhat diffuse.

As mentioned, several explanations for this distribution have been put forward: while Payne (1984, 1985a) tentatively favors inheritance as an explanatory principle for similar forms found in Zaparoan and Peba-Yaguan, Wise (2002) and Crevels and Voort (2020) seem to favor contact-induced diffusion by way of form borrowing. However, as discussed by Crevels and Voort (2020), a potential problem for the suggestion of areal spread is the minimal form of the marker, containing a very common CV sequence, which increases the likelihood that these similarities are due to chance. This then opens up a third possibility, which has not been pursued systematically, that these similar markers represent independent historical developments.

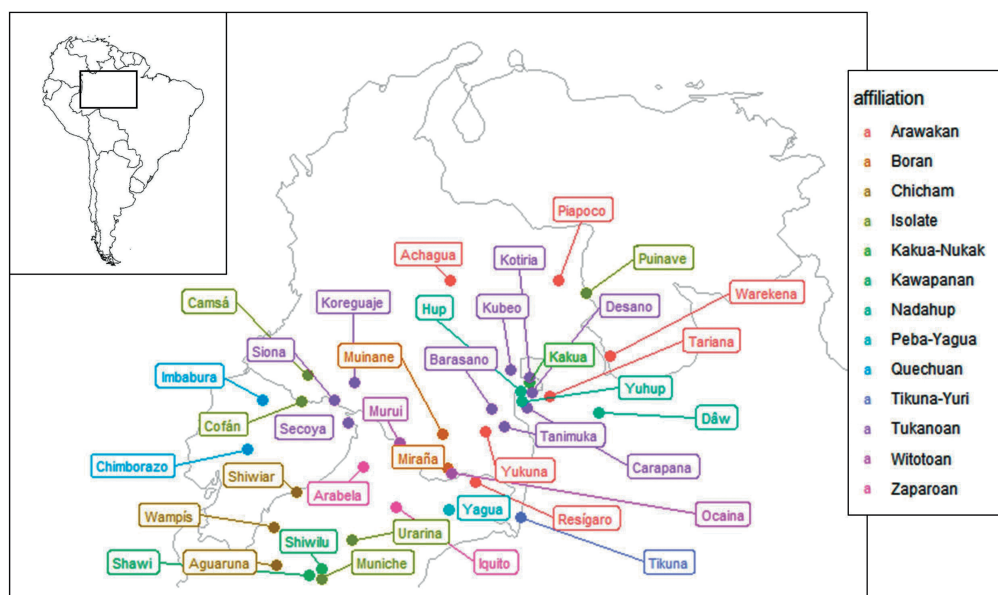
In this chapter, I will give an overview of the applicative constructions of the languages of the NWA, assessing to what extent the patterns found show functional and formal commonalities within and across language families. As far as possible, I will try to interpret whether these commonalities are best explained by common or independent historical developments in the different genealogical units. The paper is built up as follows: in Section 2, I briefly introduce the NWA and the sample for this paper. Section 3, which makes up the bulk of the paper, discusses the applicative patterns found in the languages of the area, first in terms of their presence or absence (§ 3.1), then in terms of their morphology (§ 3.2), syntax (§ 3.3), and semantics (§ 3.4). Section 4 provides a discussion of the patterns found in terms of historical processes that may be responsible for them.

2 The northwest Amazon

There are no clear natural geographical boundaries of the NWA, and so it is hard to avoid arbitrariness in defining this area. In this paper, I will consider the area roughly between the Upper Rio Negro and the Marañón River. This corresponds to the areas of present-day Ecuador, southern Colombia, northern Peru, and the westernmost adjacent strip of land in Brazil. The leading principle for the areal definition for the present paper has been to include a number of known or presumed contact situations. The most famous of these is probably the Vaupés, or more generally the Upper Rio Negro area in the northeastern corner of the NWA (see e.g. Aikhenvald 2002; Epps 2006; Epps

and Stenzel 2013), where in particular Arawakan and Tukanoan-speaking groups have been in intensive contact with each other. This is part of a larger pattern of long-term interactions between Tukano and Arawakan languages in this area (Chacon 2017), but it also includes smaller language families like the Kakua-Nukak and Nadahup families. Towards the south, there have been interactions between Arawakan, Boran, and Witotoan languages (Seifart 2015). Other contact scenarios have been proposed for the southern Marañon valley, which has been considered to be an exchange route (Rojas Berscia & Eloranta 2019), also with connections to Andean societies (see e.g. Valenzuela 2015). The western portion of the area has received less attention, but there are certainly suggestions of different kinds of contact situations, involving Chicham, Barbacoan, West-Tukanoan, northern Quechuan, and Kawapanan languages, as well as possibly languages further to the south along the Andes (Wise 2011; Valenzuela 2015; Kohlberger 2020; Muysken 2021).

These considerations have led to the following sample of languages to be discussed here, which maximizes the inclusion of these contact situations. Map 1 gives the approximate locations of the languages in the sample, Table 1 lists them with their affiliations.



Map 1: The sample languages and their approximate locations.

Table 1: The sample languages with their affiliations.

LANGUAGE	AFFILIATION	LANGUAGE	AFFILIATION
Desano	Tukanoan	Shiwiar	Chicham
Kotiria	Tukanoan	Wampis	Chicham
Tukano	Tukanoan	Aguaruna	Chicham
Barasano	Tukanoan	Shiwilu	Kawapanan
Carapana	Tukanoan	Shawi	Kawapanan
Tanimuka	Tukanoan	Ocaina	Witotoan
Kubeo	Tukanoan	Murui	Witotoan
Siona	Tukanoan	Miraña	Boran
Secoya	Tukanoan	Muinane	Boran
Koreguaje	Tukanoan	Arabela	Zaparoan
Achagua	Arawakan	Iquito	Zaparoan
Tariana	Arawakan	Dâw	Nadahup
Piapoco	Arawakan	Hup	Nadahup
Resígaro	Arawakan	Yuhup	Nadahup
Warekena	Arawakan	Kakua	Kakua-Nukak
Yukuna	Arawakan	Yagua	Peba-Yagua
Imbabura	Quechuan	Tikuna	Tikuna-Yuri
Chimborazo	Quechuan	Camsá	Isolate
Calderón	Quechuan	Puinave	Isolate
Salasaca	Quechuan	Urarina	Isolate
Cañar	Quechuan	Cofán	Isolate
Napo	Quechuan	Muniche	Isolate
Pastaza	Quechuan		
Tena	Quechuan		
Loja	Quechuan		

The Tukanoan language family is entirely spoken in the NWA as it is defined here. There is a major, high-level split between east and west Tukano (Chacon 2014), which, as the name suggests, has a clear geographical correlate as well. The Arawakan languages spoken in the NWA mostly belong to the Japura-Colombian (JC) branch of the family (the majority of Arawakan languages are spoken outside the NWA). Warekena is the only non JC language in the sample, as it is classified as Alto Orinoco (Hammarström et al. 2021). The Quechuan family is mostly found in the Andean mountain range (stretching from northern Chile and Argentina to southern Colombia), but in the NWA, the family extends deep into the lowlands. In this study I have considered both lowland and highland varieties, to achieve a more complete picture for Quechua. All of the languages in the sample belong to the northern Quechua IIC branch, probably a late (Colonial) arrival in the area, certainly in the lowlands (Muysken 2000; Ciucci and Muysken 2011). The Quechuan languages in the area likely came about through processes of language shift (Muysken 2021).

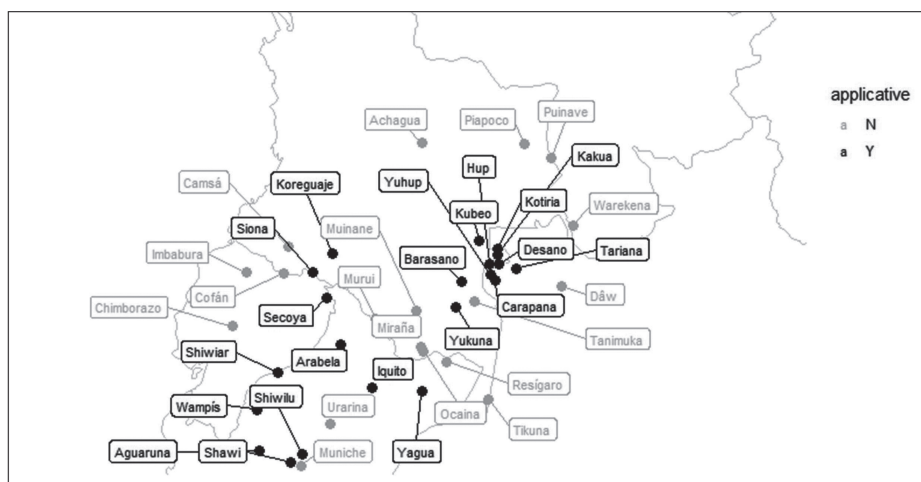
In addition, a number of smaller families and isolates are represented in the sample. The Chicham family is concentrated in the Peru-Ecuador border area, and has five known languages, of which three (Aguaruna, Wampis, and Shiwiar) are included in this study. The Zaparoan family (de Carvalho 2013) has 6 known members in Ecuador and northeast-

ern Peru, but three of these are extinct, and the others nearly extinct (Hammarström et al. 2021). Given the lack of data, only Iquitos and Arabela could be included in this study. The Kawapaman family of northeastern Peru has 2 known languages, Shiwilu and Shawi, both represented in the sample. Witotoan has 7 known languages, but most of these are poorly described, so that only Murui and Ocaina are included in the sample. Boran is a small, 2-member language family, for which the state of description allows for the inclusion of both Miraña and Muinane. Naduhup and nearby Kakua-Nukak are small families spoken in the Vaupés area, next to Arawakan and Tukanoan languages. Peba-Yaguan, and Ticuna-Yuri are small families found in the southeast of the NWA, which are represented by a single language in the sample for lack of sufficient data on the other. In addition, the sample has a few isolates: Camsá (also Kamsá) and Cofán (A'ingae) in the northeast, Puinave (Wänsohot) in the northeast, and Urarina and Muniche in the southeast.

3 Applicatives in the NWA

3.1 The distribution of applicative constructions in the sample

Before zooming in on the specific characteristics of the applicative constructions found in the area, I briefly consider the distribution of the languages that have and those that do not have an applicative construction.



Map 2: Presence versus absence of applicative constructions.

The first observation to make is that applicative constructions are not particularly widespread in the area, although the distribution may suggest some areal spread (see Map 2). As

we will see in more detail below, however, much of the observed patterns can be explained by making reference to the language family.

Some families, or branches of families, are characterized by the absence of applicative constructions. A case in point is Quechuan. Most Quechuan languages spoken further to the south have an applicative-like marker *-pu*, but the Ecuadorian and Colombian varieties of Quechua seem to have lost it. The grammars of Chimborazo (Beukema 1975) and Imbabura Quechua (Cole 1985) do not describe an applicative marker, nor does the dialectal overview study by Carpenter (1982), which includes data on most varieties of Ecuadorian Quechua. Quechuan languages belonging to the same branch (Quechua IIc) as the Ecuadorian Quechuan varieties surveyed here, but which are geographically disconnected have retained the applicative, as exemplified for Ayacucho Quechua in (1). Note that this is not an applicative construction in the strict sense, in that the verbal marker is not obligatory, and the benefactive is still marked with an oblique case, so that there is no actual promotion of oblique objects to direct object status.

- (1) Ayacucho Quechua (Quechua IIc; Sola and Parker 1964: 96)
ñuqa-paq rima-pu-wa-nqa
 I-BEN speak-BEN-1OBJ-3FUT
 ‘He will speak for me.’

Geographically nearby varieties from the northern Peruvian Upper Amazon (San Martín Quechua), that belong to a different branch have also retained *-pu*.

- (2) San Martín Quechua (Quechua IIb; Claassen 2018: 20)
pay wañu-chi-pu-n obeha-ta ñuka-pa
 he die-CAUS-BEN-3 sheep-ACC 1-BEN
 ‘He kills the sheep for me.’

In a comparative study of manuscripts, Muysken (2009: 98) concludes that the loss of the benefactive is part of a set of changes that can be dated around 1700 AD, some time after the arrival of Quechuan varieties in the area, and Muysken suggests (with some hesitation) that these later changes may be the result of substrate influences. Possibly, Barbacoan languages may have played a role, as they seem to lack morphological applicatives (see e.g. Curnow 1997 for Awa Pit, and Dickinson 2002 for Tsáfiki). For Ecuadorian Quechua, then, if anything, contact-induced changes led to the loss of applicative-like structures.

Although slightly less absolutely than Quechuan, the Arawakan languages of the sample can be characterized by a general absence of applicative constructions, with only one sample language, Yukuna, with an applicative. This lack of applicatives in the Arawakan languages of the Japura-Colombian branch is in contrast to Arawakan languages spoken to the south of the NWA, in south and central Peru, which tend to have several applicative morphemes. For instance, Michael (2008: 285–289) describes four

applicative suffixes in Nanti (instrumental *-aNt*, “presencial” *-imo* ‘in the presence of’, separative *-apitsa*, and indirective *-ako*). Mihas (2015: 275) also lists a number of different morphological applicative constructions for Asháninka Perené, including a sociative-causative *-aka* and three applicative morphemes that seem to be formally related: benefactive *-vint/-vent*, benefactive/recipient *-ront/-nont* and instrumental/reason *-ant*.

The Witotoan language family, of seven known members, is mostly scantily described, with the exception of Murui and Ocaina, which have full grammars devoted to them (Wojtylak 2017 and Fagua 2013, respectively). Wojtylak (2017: 380–390) describes two valency-increasing constructions, both causative. Addition of causative *-ta* to intransitives or transitives results in the demotion of the original subject to object (resulting in double object constructions for underlying transitives), and the introduction of a causer subject. It can also apply to non-verbal elements with a verbalizing effect. The second construction is a double causative, with the marker *-ta* applied twice, and introducing two causers. The grammar describes no applicative constructions. This seems to be true for sister language Ocaina as well. Fagua (2013: 273) reports three lexically determined causative allomorphs: *-(?)ta*, *-ha*, and *-(?)sa*, but no applicatives.

The Boran language family has two known members, of which Miraña is best described. The descriptions by Seifart (2005) and Thiesen and Weber (2012) discuss causation and reflexivity, but no applicative among the valency-changing operations. The causative morpheme is *-ts^ho*, which again is formally similar to some of the other markers of the area, as observed by Crevels and Voort (2020). Sister language Muinane has received less descriptive attention, but it does not seem to have an applicative construction either, and the causative suffix *-su* seems to be related to Miraña’s causative marker (see de Vengoechea 2012: 172–174 for a description).

Finally, some of the (near)-isolates also lack applicative constructions. Tikuna has three antipassive morphemes (*-ètà*, *-ē*, *-tàē*) as well as a causative suffix (*-’é’e*). There are also passive and factitive operations that are not associated to specific dedicated morphology (Bertet 2020: 365–385), but no applicatives. There does not seem to be any applicative construction in Camsá (isolate) either. Arguments (case marked) can simply be added to the core (O’Brien 2018: 206). There are also double-object constructions, but without any marking on the verb (ibid.: 207). Girón (2008: 360–363) discusses a morphological causative in Puinave (isolate) that can increase the valency by one, adding a causer participant, but sometimes it also just changes the role of the agent. In addition, there are valency-decreasing operations (ibid.: 363). There seem to be no applicatives, however. Urarina (isolate) has valency-decreasing possibilities (reflexive, passive, detransitivizer), and also a number of causative operations: *-erate* which attaches to either intransitive or transitive verbs, the less productive *-a* attaches to intransitives only. Additional causative strategies involve syntactic constructions with the verb *letoaa* ‘send’ (Olawsky 2006: 609–622), but again, there is no description of an applicative construction. Arguments beyond the core are marked with the oblique marker *-ke* (ibid.: 622). Although the description of Cofán (isolate) is patchy, an overview paper (Fischer and Hengeveld 2023) discusses several

causative morphemes or allomorphs (*-an*, *-en*, *-ña*) but no applicative constructions. Like Cofán, Muniche (isolate) is not very thoroughly described. Both Gibson (1996: 65) and Proyecto de documentación del idioma Muniche (2009: 20–21) describe only causative *-cha/-chi* in terms of valency-increasing operations.

3.2 The morphology of NWA applicatives

For the sample languages that *do* have applicative constructions, Table 2 lists the forms.

Table 2: The Tukanoan languages of the sample and their applicative markers.

Language	Form	Source
Desano (Tukanoan)	<i>-basa</i>	Miller (1999: 117–118)
Kotiria (Tukanoan)	<i>-bosa</i>	Stenzel (2013 344–345)
Tukano (Tukanoan)	<i>bosa</i>	Ramirez (1997: 178–180)
Barasano (Tukanoan)	<i>-bosa</i>	Jones and Jones (1991: 68)
Carapana (Tukanoan)	<i>-boja</i>	Metzger (1981: 81–82)
Kubeo (Tukanoan)	<i>-ka</i>	Morse and Maxwell (1999: 60–61)
Siona (Tukanoan)	<i>-ka</i>	Bruil (2014: 213, 251)
Secoya (Tukanoan)	<i>-cai</i>	Johnson and Levinsohn (1990: 64)
Koreguaje (Tukanoan)	<i>-kʰaj</i>	Cook and Criswell (1993: 72–73)
Yukuna (Arawakan)	<i>-ñaai/-ñai/-ña</i>	Lemus Serrano (2020: 75–76)
Aguaruna (Chicham)	<i>-hu/-tu</i>	Overall (2007: 306–307)
Wampis (Chicham)	<i>-hu/-tu</i>	Peña (2015: 584–594)
Shiwiar (Chicham)	<i>-hu/-tu</i>	Kohlberger (2020: 297–302)
Shiwilu (Kawapanan)	<i>ek-</i>	Valenzuela (2016: 516)
Shiwilu (Kawapanan)	<i>-lapi</i>	Valenzuela (2016: 516)
Shiwilu (Kawapanan)	<i>-pa</i>	Valenzuela (2016: 516)
Shiwilu (Kawapanan)	<i>-tu</i>	Valenzuela (2016: 516)
Shiwilu (Kawapanan)	<i>-i</i>	Valenzuela (2016: 516)
Shiwilu (Kawapanan)	<i>-wa</i>	Valenzuela (2016: 516)
Shiwilu (Kawapanan)	<i>-nan</i>	Valenzuela (2016: 516)
Shawi (Kawapanan)	<i>ichi-</i>	Rojas Berscia (2013: 92)
Shawi (Kawapanan)	<i>-tē</i>	Hart (1988: 269); Rojas Berscia, 2013: 50)
Arabela (Zaparoan)	<i>-t(i)a</i>	Rich (1999: 55–57)
Iquito (Zaparoan)	<i>-nii</i>	Lai (2009: 299, 301); Michael (2009: 155)
Hup (Naduhup)	<i>-ʔūh</i>	Epps (2008: 500)
Kakua (Kakua-Nukak)	<i>-āʔbuhú</i>	Bolaños (2016: 338)
Yagua (Peba-Yaguan)	<i>-ta</i>	Doris L. Payne (1985a: 271–278)

On the basis of Table 2, a number of generalizations can be made. All applicative markers in the sample languages appear to the right of the lexical verb, mostly in the form of a suffix, although in East Tukanoan languages the markers, which are clearly cognates, show different degrees of morphophonological integration with the stem. In the Colom-

bian East-Tukanoan language Tukano, *bosa* is regarded as a dependent verb in a serial verb construction. Although dependent verbs in this language are underlyingly toneless and thus prosodically dependent, they do not partake in nasal spread. In addition, many dependent verbs can also be used as independent verbs. They also appear closer to the root than *bona fide* suffixes, and they are bimoraic, unlike suffixes (Ramirez 1997: 173). A serial verb construction involving the root *bosa* is exemplified in (3).

- (3) Tukano (East Tukanoan; Ramirez 1997: 185)

Pédudu-de da'da bosa-bĩ
 Pedro-OBJ work BEN-PRES.VIS
 'He works for Pedro.'

Likewise, in Kotiria, *-bosa* is part of a set of noninitial verb roots, which appear contiguous to an initial verb root, and can be contrasted with nonroot stem morphemes, which appear further from the root, and represent a layer of verbal morphology that is more grammaticalized (Stenzel 2013: 244–245).

- (4) Kotiria (East Tukanoan; Stenzel 2013: 209)

yũ'ú wa'í-ré do'á-bósá-í-tá mũ'ũ-ré
 1SG fish-OBJ cook-BEN-1/2.M-INT 2SG-OBJ
 'I'm going to cook the fish for you.'

In Barasano, *-bosa* is analyzed as a suffix, and elements can come in between it and the verb root (although the reverse order is also possible).

- (5) Barasano (East Tukanoan; Jones and Jones 1991: 68)

yũ karta yũ-re ābi-a-bosa-ya bĩ
 1SG letter 1SG-OBJ pick.up-MOT-BEN-PRES.IPFV 2SG
 'Take my letter for me.'

In Carapana, the benefactive marker *-boja* is regarded to be a second order suffix. The difference between second order and first order suffixes in Carapana is that the latter may occur on the initial member of a serial verb construction, the latter cannot (Metzger 1981: 60). The analysis furthermore suggests that the second order suffixes are further removed from the root than the first order suffixes if both types occur, but unfortunately, Metzger does not provide examples to corroborate this directly.¹ Example (6) gives an instance of the use of the suffix *-boja*.

¹ He does, however, give examples of the second order suffix *-nucũ*, which shares the same slot as *-boja*, in combination with first order suffixes, which indeed precede it.

(6) Carapana (East Tukanoan; Metzger 1981: 82)

yɪ áti-boja-ya

I do-BEN-IMP

'Please do (it) for me

Flexivity is relatively uncommon for the applicative markers in the sample, but it does occur. Yukuna (Lemus Serrano 2020), for instance, has a morpheme *-ñaa* with allomorphs *-ñai*, and *-ña*. The variant *-ñai* is morphologically conditioned by the presence of the past tense marker *-cha*; *-ñaa* and *-ña* are free variants.

In all three Chicham languages, there is lexically determined allomorphy, as well as homophony with the first person singular object marker, which shows the same allomorphy with the same distribution. The first person object in combination with the applicative, yields deviant, but systematic patterns, as shown for Aguaruna in Table 3.

Table 3: Morphological interaction of noun class, applicative marking, and first person object marking in Aguaruna (Overall 2007: 319).

class	applicative	1sg.obj	applicative+1sg.obj
1	<i>-hu</i>	<i>-hu</i>	<i>-hu-tu</i>
2	<i>-tu</i>	<i>-tu</i>	<i>-tu-hu</i>

Whereas the more abstract formal characteristics discussed above show a number of similarities across languages, with a tendency towards suffixation, or at least the order lexical verb – applicative marker, the forms themselves show considerable variation, which seems to be mainly constrained by genealogical units.

The Tukanoan languages in the sample feature two recurring forms to mark applicatives: *-ka* and *(-)bosa/basa*. These two markers follow an almost perfect East-West distinction, the former being mostly restricted to West Tukano, the latter to East Tukanoan languages. The only exceptions are the East Tukanoan language Kubeo, which follows a western pattern, and Tanimuka (also East Tukanoan), for which no applicative marker is described. As discussed above, the element *bosa* and related forms in the East Tukanoan languages seems to have its origin in a serial verb construction, and presently is in different stages of grammaticalization towards becoming an affix in the different languages. This suggests that the form *-k(h)a(j)* and its reflexes may represent an older form. That Kubeo, as the only East Tukanoan language has retained the probably older form is in line with the assessment that Kubeo has relatively more retentions and probably developed in relative isolation from the other East Tukanoan languages (Chacon 2013: 414–418).

The Chicham languages also show a clearly coherent pattern. The forms in the three languages are clearly cognate (*-hu/-tu* in Aguaruna, *-ru/-tu* in Wampis and Shiwiar), the allomorphy follows the same pattern, including the pattern given in Table 3, and, as we

will see below, the syntax (§ 3.3) and semantics (§ 3.4) are also very similar. All of these very specific commonalities strongly suggest that the applicative, with its idiosyncrasies, can be traced back to Proto-Chicham. This is relevant in the discussion of *ta*-like applicative markers, of which Chicham languages are hypothesized to be part (Crevels and Voort 2020: 189). If so, then areal influence must have taken place prior to the diversification of the family, or else the Chicham languages must be hypothesized to be among the donor languages for the areal spread of this form.

The remainder of the families in the sample show a less coherent picture, unless it is in terms of the absence of applicative constructions (see § 3.1 above). Of the Arawakan languages in the sample, only Yukuna² has an applicative construction, marked with *-ñaa*. Hanson (2010: 272–280) describes two applicative morphemes for Yine, an Arawakan language spoken outside the NWA region in southern Peru, one of which is *-ya*, marking a number of different roles, including source and malefactive, two meanings also found for the applicative construction in Yukuna. This marker may therefore be cognate with Yukuna *-ñaa*, but this requires further research. Lemus Serrano (2020) mentions that the lexical source for the applicative marker in Yukuna is probably the verb *ñáa/ñái* ‘escape from’.

Kawapanan Shiwilu and Shawi are the only languages in the sample with more than one applicative construction. Although they differ considerably from each other in their inventories, the prefixes *ek-* (Shiwilu) and *ichi-* (Shawi), as well as the suffixes *-tu*³ (Shiwilu) and Shawi *-të* (pronounced /ti/ or possibly /tu/, with allomorph *-ta* in combination with progressive verb semantics), can be considered cognates, but the remainder of Shiwilu applicatives do not seem to be present in Shawi. The two Kawapanan languages, then, show both stability and change regarding morphological applicative marking, as either Shawi has lost a number of applicative and applicative-like constructions, or Shiwilu has acquired them through contact. The functional overlap with some pre-Andine Peruvian Arawakan languages (presential, relinquitive) would suggest a potential connection with Shiwilu (see Section 4).

Zaparoan languages Iquito and Arabela also show disparity in their applicative markers. Iquito *-nii* is possibly related to one of the causative allomorphs of Arabela, although at this point this is only a conjecture. Arabela *-ta/-tia* introducing an accompanying person or thing for the patient of a transitive or the S of an intransitive verb, with a range of interpretations (Rich 1999). The allomorphy is also present in the form of the

2 Tariana has syntactic (labile verbs) and morphological lookalikes. The morpheme surfacing in the latter clearly has a different etymology than the marker in Yukuna.

3 Valenzuela (2016) distinguishes two markers *-tu* in Shiwilu, which are historically related. One is analyzed as an applicative (with locative semantics), the other, termed valency modifier, is not analyzed as an applicative, but its presence is required with some of the applicatives. In addition, *-ta* can appear on its own with differential effects on the valency of the base verb (decreasing or increasing). The Shawi marker *-të* is semantically closer to this latter use of Shiwilu *-tu*, suggesting that the locative applicative use was a later development in Shiwilu.

homophonous instrument marker *-ta/-tia*, as noted by Payne (1985a) and Rich (1999), who assumes that the applicative marker stems from the instrument postposition (p. 76).

Given that the instrument markers in Arabela and Iquito may well be related, and given that only Arabela seems to have extended its use to an applicative, it may well be that this grammaticalization process was influenced by Yagua, as suggested by Wise (2002). For Yagua, Payne (1985a: 271) discusses the marker *-ta*, which is most frequently used to license semantic comitatives or instruments.⁴ The same marker is also found with nouns, where it marks the comitative/instrument role. These facts seem to point at a shared history between Arabela and Yagua, although the nature of this shared history is subject to debate (see Section 1 above). Interestingly, Yagua has a lexically restricted causative morpheme *-niiy* which may be related to Arabela causative *-ni*. Although it is unclear what the distribution of *-ni* in Arabela is, the fact that it is presented as one of many causative morphemes leaves open the possibility that *-ni* in Arabela is also lexically restricted. In addition, Yagua has the productive causative marker *-taniiy*, possibly a combination of the *-ta* applicative and causative *-niiy*. In short, although all of this requires further research, there is a very likely connection between Yagua and Arabela *-ta*, as well as a possible connection between Yagua *-niiy*, Arabela *-ni* (both causative), and Iquito *-nii* (applicative).

The final languages to be discussed for this section are Hup and Kakua. The suffix *-ʔüh* in Hup adds an animate participant (Epps 2008: 500). This marker (in slightly different guises) has a number of seemingly unrelated functions. In preverbal or independent position, it marks reciprocal and a kin term (sibling of opposite sex). As a postverbal marker it can indicate applicative, jussive, and epistemic modality. The uses of preverbal and postverbal each seem to be related, and it may even be that all of these are historically related (see Epps 2008: 504–505 for discussion).

For the sister languages Yuhup and Dâw, no applicative construction is described, but Yuhup has a possibly related element *~jah*, which Ospina Bozzi (2002: 400) analyzes as a bleached and eroded verb root of the verb ‘let, allow’, which has among its functions (next to e.g. causative and permissive uses, but also reflexive, intensity and repetition) the ability to introduce an experiencer argument, affected by the situation, to an originally intransitive clause (ibid.: 402–407). The situation in Dâw is less clear, but Martins (2004: 266) mentions a grammaticalization path of the verb *dóʔ* from a movement verb to verb of causation or permission in verbal compounds. However, there seems to be no extension towards an applicative-like use. In addition, Dâw has a transitivity operation (marked by a descending tone). Although it is sometimes associated with partly unpredictable semantics, it mostly seems to have a causative effect (Martins 2004: 180). All in all, there seems to be a family-internal grammaticalization process, from serial verb construction to affix, which has led to an unusual set of functions of historically

⁴ Some of the examples discussed in Payne (1985a, e.g. p. 275) suggest that the marker *-ta* in Yagua also has an allomorph *-tya*.

related markers, including both valency-increasing and valency-decreasing uses in Hup and Yuhup.

Bolaños (2016) discusses no valency-increasing operations for Kakua (Kakua-Nukak).⁵ In fact, she mentions that the reflexive/reciprocal prefix *mĩk-* is the only valency-changing morpheme of the language (Bolaños 2016: 247). There is, however, a benefactive imperative, though, with the marker *-áʔbuhú*, which licenses a benefactive participant.

(7) Kakua (Kakua-Nukak; Bolaños 2016: 338)

kǎn=dĩʔ ʔibʔ-áʔbuhú

3SG.M=OBJ take.out-IMP.BEN

‘Take (it) out for him.’

Given the length of the morpheme, Bolaños assumes that it is diachronically complex. A possible element of the suffix is the directional enclitic *=buh*, which in turn comes from a verb root meaning ‘to perform an action from a distance’, which may be connected to performing an action on someone’s behalf (Bolaños 2016: 338–339).

In conclusion, although the very general formal aspects of the applicative markers coincide to some degree (they tend towards morphological, suffixal expression), the forms themselves suggest more family-internal developments.

3.3 The syntax of applicative constructions in the sample

In this section, I highlight the more syntactic aspects of the applicative constructions found in the area, focusing mainly on the expression and morphosyntactic marking of arguments, particularly in relation to clauses with underived transitive and ditransitive verbs. Unfortunately, the available information in the grammars does not allow for a systematic treatment of the potential of applicative constructions to form input for further valency-changing operations, or for relative clauses. I will therefore have less to say about how applicative constructions relate to other constructions, and restrict myself to making occasional remarks where information was available. Given that the languages of the area employ a range of techniques to mark grammatical relations, and that these techniques tend to be relatively homogeneous within language families, the discussion in this section will be organized around families.

Tukanoan languages are nominative-accusative in that S and A arguments are treated the same in terms of case marking and indexing, and differently from P arguments. Most

⁵ There is some debate with respect to the genealogical affiliation of Kakua and Nukak, as Martins (2005) proposes they are part of the Nadahup family. Jolkesky (2016) also includes Puinave in this genealogical unit. Epps and Bolaños (2017) consider a distant connection between Nadahup, Kakua-Nukak, and Puinave plausible, but at this point inconclusive. In this paper I follow the most conservative classification of Epps and Bolaños (2017).

Tukanoan languages have a system of differential object marking, where the presence of the object marker interacts with definiteness and specificity. The same marker is also used to code a wider range of roles, but without the differential aspect. In terms of indexing on the verb, Tukanoan languages mark the subject (S/A) but not the object.

The presence of the applicative marker in Tukanoan languages licenses an argument that is marked with the case marker *-re*. The construction does not promote an otherwise oblique participant in that there seems to be no alternative way to express beneficiaries (on the interpretation of the applied object in Tukanoan languages, see Section 3.4). With respect to the flagging behavior (there is no object indexing in Tukanoan languages, so the discussion will be restricted to flagging), the applied object does not always behave entirely similar to direct objects, however. This can be illustrated with data from Kotiria. Kotiria objects can be marked with the suffix *-re*. However, as mentioned above for Tukanoan more broadly, direct objects are not always flagged in Kotiria: non-flagged direct objects are less specific and definite than flagged objects. Zero-marked direct objects in Kotiria are only possible in immediately preverbal position.

- (8) Kotiria (East Tukanoan; Stenzel 2013: 331)
- a. *hí-phiti-ro chù adá-ta-ra*
COP-COLL-SG food get-come-VIS.IPFV.2/3
'Everyone brings a lot of food.'
 - b. *tí-da dá-sá chúa-re chù yoá-ra*
ANPH-PL get-MOT.inside food-OBJ eat do/make-VIS.IMPFV.2/3
'They take the food inside and eat.'

The marker *-re* is also used for flagging R participants in ditransitive constructions, for temporal adjuncts, and spatial complements of motion predicates that have been established in the preceding discourse. Example (9) illustrates the inherently ditransitive verb *wa-* 'give', which takes two objects, both marked with *-re*.

- (9) Kotiria (East Tukanoan; Stenzel 2013: 161)
- mũ'u=yahírho'na-re yũ'u-re wa-ga*
2SG.POSS=heart-OBJ 1SG-OBJ give-IMP
'Give me your heart.'

The recipient in these constructions with inherently ditransitive verbs is always marked with *-re*. In other words: there is no pattern of differential case marking for indirect objects. The same pattern can be observed with applied objects. Applied objects therefore behave as R participants in ditransitive constructions. Inherently intransitive verbs with the applicative marker *-bosa* are not discussed in Stenzel (2013), whose description of *-bosa* as "increas[ing] the valency of the independent verb from one to two object arguments" suggests that *-bosa* only combines with transitive bases.

To the extent that I have been able to ascertain, this non-differential marking pattern of the applied object as well as indirect objects of underived ditransitives is found almost throughout the Tukanoan languages of the sample, independently of whether they follow the *-k(h)a(i)* pattern or the *-bosa/basa* pattern. Tukano marginally allows differential object marking for indirect objects. In Example (10), the morpheme *diki* ‘each’ makes the indirect object participant generic, according to Ramirez (1997: 227).

- (10) Tukano (Tukanoan; Ramirez 1997: 227)

dãâ-diki o’ô-ya teé-de
 they-each give-IMP those.things-OBJ
 ‘Give those things to each of them.’

In addition, Example (6) above suggests that in Carapana, differential case marking is also available for applied objects. It is not clear from the description in Metzger (1981) whether this is true more generally for R participants of monomorphemic ditransitives.

The Arawakan languages generally have no core case marking, but Yukuna marks R participants in ditransitive constructions with the oblique enclitic *=jló*, illustrated in (11).

- (11) Yukuna (Arawakan; Lemus Serrano 2020: 68)

na=a’-chá píño [ri=jló]_{OBL} [kujnú]_O.
 3PL=give-PST again 3SG.NF=to cassava
 ‘They gave cassava to him again.’

The applied objects pattern with direct objects in being unmarked. The applicative seems to combine with intransitives only, forming transitives, so in that sense, a regular transitive syntactic frame is associated with the applicative.

- (12) Yukuna (Arawakan; Lemus Serrano 2020: 68)

Chúwa tâ kája wa=i’jna-ñáa pi=ikhá.
 now EMPH already 1PL=go-APPL 2SG=PRO
 ‘We’re leaving you now.’

The Chicham languages are strictly nominative-accusative, and employ both case marking (including an accusative marking) and indexing (subject and object) to code grammatical relations. Object indexing is only available for speech act participants in all three Chicham languages investigated here, third person objects are unmarked. Shiwiari and Wampis have portmanteau markers for certain scenarios.⁶ Both direct and

⁶ Shiwiari uses portmanteau suffixes for all scenarios involving SAP objects except first person singular, Wampis has portmanteau markers for local scenarios involving a second person object.

indirect objects can control object indexing. With ditransitive verbs, the verb will mark an SAP object if available. This generally is the R participant.

- (13) Aguaruna (Chicham; Overall 2007: 316)

mi-na su-hu-sa-ta
 1SG-ACC give-1SG.OBJ-ATT-IMP
 ‘Give it to me!’

The presence of an applicative marker makes the object indexing slot available for the applied object, as can be seen in (14) from Shiwiar.

- (14) Shiwiar (Chicham; Kohlberger 2020: 298)

papá-r=ka hĩá=n naha-t-ru-á-mia-ji
 father-1SG.POSS=TOP house=ACC make-APPL-1SG.OBJ-PFV-REM.PST-3.DECL
 ‘My father made me a house.’

Example (15) illustrates that overtly expressed applicative participants are marked with the accusative.

- (15) Aguaruna (Chicham; Overall 2007: 306)

amitĩ mi-na atafu-na yu-hu-tu-a-ĩ
 fox 1SG-ACC chicken-ACC eat-APPL-1SG.OBJ-HIAF-3:PFV
 ‘A fox ate my chicken.’

On the other hand, Peña (2015) reports that the applied object optionally carries a benefactive marker in addition to the accusative marker:

- (16) Wampis (Chicham; Peña 2015: 591)

[*mama=na*] [*ui-nau=na*] *hii-tu-ma-ji*
 manioc=ACC 1SG-BEN=ACC pull.out.PFV-APPL-REC.PST-3.PST+DECL
 ‘He harvested manioc for me.’

There are also cases where the applicative does not trigger object marking on the verb. This is the case in semi-reflexive interpretations in Wampis, where the applicative participant is identical to the subject.

- (17) Wampis (Chicham; Peña 2015: 590)

napi=na karama-ru-u a-sa-nu fiitra-tfau
 boa=ACC dream.of-APPL-NMLZ COP-SUB-1SG.SS good-NEG.NMLZ
nikapi-a-ha-i
 feel-IPFV-1SG-DECL
 ‘Having dreamed of the boa (to my detriment), I feel bad.’

As can be seen, the applicative here does not license a 1SG object marker on the verb, and so it does not seem to increase the valency of the (already transitive) verb *karama* ‘dream of’. It is not clear to what extent this type of construction exists in the other Chicham languages. Kohlberger (2020: 299) discusses similar examples for Shiwiar (i.e. without object indexing), but they include a reflexive marker (a construction that also exists in Wampis, see e.g. Peña 2015: 890).

Like the Chicham languages, the Kawapanan languages of the sample display both person indexing on the verb and case marking on nominal arguments, although the families differ in the more detailed aspects of their systems. In Shiwilu, both arguments are obligatorily marked on the verb by means of a portmanteau indexing suffix, with the exception of scenarios with a third person object, which take the unipersonal subject markers also found on intransitive verbs. Ditransitive verbs take the portmanteau morphemes, which refer to the A and R arguments, leaving the T argument unmarked (Valenzuela 2016: 520). Shawi indexing follows a system of separable subject and object markers. Subject markers also differ according to tense and mood (Rojas Berscia 2019). The object index in transitive clauses seems to refer to the R argument.

- (18) Shawi (Kawapanan; Bourdeau 2015: 26)

kiya-ri-n-su *pei* *keta-ra-i-nkema*.
 1PL.EXCLM-ERG-?-DEF house give-IND-1.PL.EXCL-2.PL.O
 ‘We will offer you a house.’

In terms of case marking, the Kawapanan languages have an optional marker of A participants, *=ler* in Shiwilu, *-ri* in Shawi, whose appearance is conditioned by disambiguation requirements and pragmatic status (Valenzuela 2015: 42–45).

Applicative constructions in Shiwilu follow transitive or ditransitive patterns in that the applied object is indexed on the verb:

- (19) Shiwilu (Kawapanan; Valenzuela 2016: 528, 533)

- a. *ñiñi’wa=pen* *ek-pekla-llun*. */*pekla-llun*
 dog=POSS.2SG SOC.CAUS-produce.noise-NFUT.3SG>1SG
 ‘Your dog barked at me.’
- b. *Papa=wek* *tek-susu-pa’-llun* *wila=wek*.
 father=POSS.1SG CAUS-grow-APPL-NFUT.3SG>1SG child-POSS.1SG
 ‘My father helped me raise my child.’

Applicatives that combine with ditransitive roots mark the applied (fourth) argument on the verb:

(20) Shiwilu (Kawapanan; Valenzuela 2016: 530)

Pidir uku'la-lapi-llun kusher=wek.

Fidel sell-APPL-NFUT.3SG>1SG pig=POSS.1SG

'Fidel sold my pig (to sb. else) and left leaving me behind.'

(for example, acted without my consent and left with the money)

At least some of the applicatives also allow for passivization, confirming the object status of the applicative:

(21) Shiwilu (Kawapanan; Valenzuela 2016: 528, 535)

a. *Kwa ek-pekla-pi=ku nuka'-ka*

1SG SOC.CAUS-produce.noise-NMLZ=PRED.1SG COP-1SG

(*ñini'wa=pen=lek*).

dog=POSS.2SG=INSTR

'I was barked at (by your dog).'

b. *Imicha anu'-tu-pi nuka'-a tunla=lek.*

Eméríta fall-LOC-NMLZ COP-3SG worm=INSTR

'Eméríta was fallen on by the worm.'

Some markers (*-i*, *-wa*, *-nan*, *-willi*) require the presence of the valency modifier *-tu*, a construction termed double applicative marking by Valenzuela (2016).⁷ The marker *-tu* can either increase or decrease valency, depending on the verbal⁸ host.

Example (22) illustrates such a double applicative construction with affective *-i*. One way to interpret this construction is that the applicative morpheme that precedes *-tu* functions as its specifier, not only forcing a valency increase interpretation, but guiding the interpretation of the role of the applied object.

(22) Shiwilu (Kawapanan; Valenzuela 2016: 536)

a. *wila=wek=sha ipa' wichi'-lli*

child=POSS.1SG=DIM already fall.asleep-NFUT.3SG

'My little grandson already fell asleep'.

b. *Wila=wek=sha ipa' wichi'-i-tu-llun. /*wichi'-i-llun*

child=POSS.1SG=DIM already fall.asleep-APPL-VM-NFUT.3SG>1SG

'My little grandson already fell asleep to my benefit.'

The situation for Shawi is less clear. Example (23) suggests that the sociative causative adds an object argument that can control person indexing on the verb. Semantically

⁷ Valenzuela regards the valency modifier *-tu* to be synchronically different from the locative marker *-tu*, although they are historically related,

⁸ The marker also attaches to adjectives or nouns to form verbs.

speaking, these sociative causatives can be argued to be either causatives or applicatives, depending on what is regarded as the underlying (in the sense of the event without the valency-increasing marker): ‘I work’ or ‘you work’ in Example (23) below.

- (23) Shawi (Kawapanan; Bourdeau 2015: 25)
Ka-ri=nke ichi-saka-te-ra-(w)-nke.
 1-ERG=2.OBJ SOC.CAUS-work-VAL-IND-1-2.OBJ
 ‘I make you work (and work with you).’

Barraza de García (2005), focusing on the Sillay variety of Shawi, shows that the multi-functional marker *-ti* in its applicative use licenses object indexing of the applied argument on the verb.

- (24) Shawi (Kawapanan; Barraza de García 2005: 175–176)
mašu-ri imu-ti-r-in-nkin
 old.man-ERG/TOP vomit-APPL-IND-3-2
 ‘The old man has vomited on you.’

Zaparoan languages Arabela and Iquito do not mark objects, either on the verb or on the noun, although Arabela has some different pronominal forms, depending on the function. For peripheral functions, postpositions or case suffixes are used, which form a large group. The lack of morphosyntactic marking of core arguments makes it harder to show the morphosyntactic effects of the applicative. The main characteristic of interest is that in applicative constructions, the applied object bears no case marker or adposition, suggesting it is part of the core, as can be seen for the applied objects *morejaca* ‘yuca’ in (25) and *nuú* ‘him’ in (26).

- (25) Arabela (Zaparoan; Rich 1999: 55–57)
cua morejaca tiurii-tia-ree-nijia.
 1SG yuca trip-APPL-PFV-1SG
 ‘I tripped with my load (yuca).’
- (26) Iquito (Zaparoan; Michael 2009: 155)
piyüini yahuüni=jina nu=árii-yaáriqui tií
 all day=LOC 3SG=pass.by-REM.PST.IPFV there
nu=puhuaajü-nii-yaáriqui=na nuú.
 3SG=whistle-APPL-REM.PST.IPFV=REP 3SG
 ‘Whenever he passed by there, it (a forest spirit) whistled at him.’

Yagua indexes the gender or person/number information of subject arguments on the verb when no subject NP is expressed, or if the subject NP is expressed post-verbally (and there are different sets for animate and inanimate subjects). Objects are generally

marked by enclitics,⁹ which immediately precede the object NP, but prosodically attach to any constituent that precedes them. When no object NP is expressed, the object clitics tend to be clause-final. Yagua does not have any core case markers. Payne (1985a: 271) discusses the marker *-ta*, which is most frequently used to license semantic comitatives or instruments. The same marker is also found with nouns, where it marks the comitative/instrument role. The following pair shows the uses of *-ta* as a postposition (27a) and as an applicative marker (27b).

- (27) Yagua (Peba-Yaguan; Payne 1985: 273–274)
- a. *sa-jichitij jumurutaq-ta-rà tĩstqasuuy*
 3SG-poke machete-COM/INSTR-INAN ball
 ‘He pokes the ball with a machete.’
 - b. *sa-jichitij-ta-rà jumurutaq-rà tĩstqasuuy*
 3SG-poke-APPL-INAN machete-INAN ball
 ‘He pokes the ball with a machete.’

As can be seen in this example, the presence of the applicative marker on the verb in (27b) licenses the presence of a non-case-marked instrumental NP, as well as the presence of the inanimate marker *-rà*, immediately preceding its referent *jumurutaq*, effectively creating a double-object construction. This is the same type of construction as an underived ditransitive (Doris L. Payne, 1985a: 274).

Kakua indexes subjects on the verb by means of proclitics, and marks objects (both direct and indirect) on the NP by means of a case clitic *=diʔ*. This case marker is compatible with a wide range of semantic interpretations, including patient, benefactive, malefactive. As is common in the area, Kakua marks objects differentially, although the exact parameters governing the presence or absence of the object case marker are not entirely clear (see Bolaños 2016: 191–205 for discussion). The applicative in Kakua, restricted to imperatives, does allow for marking of the applied object with the object marker, but since benefactive is part of the semantics of the object marker, and since there seems to be no alternative base construction, it is unclear to what extent this constitutes a *bona fide* applicative construction.

- (28) Kakua (Kakua-Nukak; Bolaños 2016: 338)
- kān=diʔ ʔibʔ-áʔbuhú*
 3SG.M=OBJ take.out-IMP.BEN
 ‘Take (it) out for him.’

⁹ It is not clear what exactly governs or licenses the absence of object enclitics. Doris L. Payne (1985a: 46–48) suggests that it may be determined by specificity and individuation of the object argument, but acknowledges that there are situations with specific, individuated object participants, which nevertheless do not trigger object clitics.

However, if we compare (28) to an imperative of a three-place verb like ‘give’, the recipient can also be marked with the object case, but no special imperative form is required, suggesting that *-á?buhú* does extend the valency of two-place verbs to three, which then behaves in the same way as an underived ditransitive.

- (29) Kakua (Kakua-Nukak; Bolaños 2016: 189)
Hāmu=di? ma=nim=di? ma=wĩ?-í
 Hamu=OBJ 2SG-daughter=OBJ 2SG=give-IMP
 ‘Give Hamu your daughter!’

Like Kakua and other languages of the area, Hup also has a system of differential object marking. The case marker for objects is *-ān*, which obligatorily marks human objects, while non-human animates are optionally marked, and inanimates remain unmarked. Case marker *-ān* is also used for beneficiaries and recipients, but in that role there is no differential marking (Epps 2008: 166).¹⁰ The suffix *-ʔūh* in Hup adds an animate participant. The added participant is most commonly a recipient, benefactive or malefactive (Epps 2008: 500). The participant introduced in this way is marked as an object if overtly expressed.

- (30) Hup (Nadahup; Epps 2008: 501)
hid (tth-ān) g’āʔ-ʔūh-ūy
 3PL 3SG-OBJ be.suspended-APPL-DYN
 ‘They’re lying in (someone’s) hammock.’ (i.e., without his knowledge or approval)

Summarizing the patterns discussed above, applied objects generally follow marking patterns that exist for direct and indirect objects of underived verbs, with a tendency for increased morphological markedness of applied objects in some languages, and decreased markedness in others:

- In systems with differential object marking, the applied objects tend to always be marked (Tukanoan, Hup, possibly Kakua).
- In languages with object indexing on the verb with a single slot available, the applied object gets preference over other potential controllers (Chicham, Kawap-anan).
- In languages without core case marking, applied objects are zero-marked, unlike oblique arguments (Yagua, Zaparoan, Yukuna).

¹⁰ There is also a historically related oblique marker *-an*, which marks several kinds of locational relations. This marker shows a close resemblance to the object marker, the only difference being the rising tonal pattern in the object marker. It is not always clear which formative is used (Epps 2008: 184).

There is some variation in terms of the transitivity of the host, which is summarized in Table 4—to the extent that this could be determined on the basis of the written sources (these are the same as the sources given in Table 2 above, of which Table 4 is an extension).

Table 4: Overview of applicatives in the sample in terms of form, possible hosts, and morphosyntactic marking.

Language	Form	host	morphosyntactic marking
Desano (Tukanoan)	<i>-basa</i>	transitives	object case
Kotiria (Tukanoan)	<i>-bosa</i>	transitives	object case
Tukano (Tukanoan)	<i>basa</i>	transitives	object case
Barasano (Tukanoan)	<i>-bosa</i>	transitives	object case
Carapana (Tukanoan)	<i>-boja</i>	transitives	object case
Kubeo (Tukanoan)	<i>-ka</i>	transitives	object case
Siona (Tukanoan)	<i>-ka</i>	transitives	object case
Secoya (Tukanoan)	<i>-cai</i>	transitives	object case
Koreguaje (Tukanoan)	<i>-k'aj</i>	transitives	object case
Yukuna (Arawakan)	<i>-ñaa/-ñai/-ña</i>	intransitives	zero
Aguaruna (Chicham)	<i>-hu/-tu</i>	transitives, intransitives	object case, object index
Wampis (Chicham)	<i>-hu/-tu</i>	transitives, intransitives	object case, object index
Shiwiari (Chicham)	<i>-hu/-tu</i>	transitives, intransitives	object case, object index
Shiwilu (Kawapanan)	<i>ek-</i>	transitives, intransitives	object index
Shiwilu (Kawapanan)	<i>-lapi</i>	intransitives	object index
Shiwilu (Kawapanan)	<i>-pa</i>	transitives	object index
Shiwilu (Kawapanan)	<i>-tu</i>	intransitives	object index
Shiwilu (Kawapanan)	<i>-tu</i> ¹¹	intransitives, transitives	object index
Shiwilu (Kawapanan)	<i>-i</i>	transitives	object index
Shiwilu (Kawapanan)	<i>-wa</i>	intransitives	object index
Shiwilu (Kawapanan)	<i>-nan</i>	transitives, intransitives	object index
Shawi (Kawapanan)	<i>ichi-</i>	transitives, intransitives	object index
Shawi (Kawapanan)	<i>-tē</i>	transitives, intransitives	object index
Arabela (Zaparoan)	<i>-t(i)a</i>	intransitives	zero
Iquito (Zaparoan)	<i>-nii</i>	intransitives	zero
Hup (Naduhup)	<i>-ʔúh</i>	transitives (intransitives)	object case
Kakua (Kakua-Nukak)	<i>-áʔbuhú</i>	transitives	object case
Yagua (Peba-Yaguan)	<i>-ta</i>	transitives, intransitives	zero

¹¹ There are two homophonous and diachronically connected markers *-tu* in Shiwilu. The second is classified as a valency modifier by (Valenzuela 2016), but this marker has, among its uses, applicative (see also Section 3.4).

3.4 The semantics of the applicative constructions in the sample

The most common semantic interpretation of the applicatives in the area is benefactive/recipient, which is also the most common semantic interpretation world-wide (Polinsky 2013), a further common interpretation is malefactive. Benefactive seems to be the only possible interpretation in most Tukanoan languages. An exception is West-Tukanoan Koreguaje, whose marker *-khaj* adds an argument role to the verb semantics that can be interpreted as beneficiary (31a) or maleficiary (31b).

- (31) Koreguaje (West Tukanoan; Cook and Criswell 1993: 72–73)

- a. *ĩĩĩ miĩĩ-re ʝoʔo-k^ha-sa*
 I you-OBJ work-BEN-DES.SG
 ‘I will work for you.’
- b. *k^hani-sō-i-na hamu-ʝai-pi mio-ra’-ʝo-ri*
 sleep-INTS-SEQ.M.SG-DS armadillo-jaguar-SRC finger-DIM-CLF-DIM
āni-sō-k^hai-si-na-ⁱ-me ʝĩⁱ-re
 eat-INTS-BEN-PFV-NMLZ.PL-VBLZ-PL 1SG-OBJ
 ‘While I was sleeping, the dogs ate my little finger (to my detriment).’

The situation as in Koreguaje, with both benefactive and malefactive as possible interpretations is common in the area. The applicative in Chicham languages, for instance, can have both readings, depending on the context, as can be seen in e.g. Examples (14) and (15) above, repeated here for convenience as (32) for benefactive, and (33) for malefactive.

- (32) Shiwiar (Chicham; Kohlberger 2020: 298)

- papá-r=ka hĩá=n naha-t-ru-á-mia-ji*
 father-1SG.POSS=TOP house=ACC make-APPL-1SG.OBJ-PFV-REM.PST-3.DECL
 ‘My father made me a house.’

- (33) Aguaruna (Chicham; Overall 2007: 306)

- amitfĩ mi-na atafu-na yu-hu-tu-a-ĩ*
 fox 1SG-ACC chicken-ACC eat-APPL-1SG.OBJ-HIAF-3:PFV
 ‘A fox ate my chicken.’

The Shiwilu applicative *-i*, in combination with *-tu*, yields a benefactive or malefactive interpretation:¹²

¹² These are considered separate morphemes because *-tu* also combines with other applicative morphemes.

(34) Shiwilu (Kawapanan; Valenzuela 2016: 536–537)

- a. *wila=wek=sha ipa' wichi'-i-tu-llun.*
 child=POSS.1SG=DIM already fall.asleep-APPL-VM-NFUT.3SG>1SG
 'My little grandson already fell asleep to my benefit.'
- b. *Idu chimin-i-tu-llun.*
 Eleuterio die-APPL-VM-NFUT.3SG>1SG
 'Eleuterio died to my detriment.'

The applicative marker *-lapi* has a default interpretation of a relinquitive (leaving behind), but can have benefactive or malefactive overtones. For some verbs, such as *lun*- 'speak', the only available interpretations of *-lapi* are malefactive or benefactive.

(35) Shiwilu (Kawapanan; Valenzuela 2016: 531)

- lun-lapi-llun.*
 speak-APPL-NFUT.3SG>1SG
 'S/he spoke for me (in my favor, instead of me).' / 'S/he accused me.'
 '*S/he spoke and left me behind.' / '*S/he spoke having left me behind.'

The imperative applicative in Kakua seems to have only a benefactive interpretation (28 above). A dative (benefactive/recipient) and/or malefactive interpretation is found for the only applicative marker in Hup. Compare (30) above with (36).

(36) Hup (Nadahup; Epps 2008: 501)

- hid-ăn hǝp tih nɔʔ-ʔũh-ũy*
 3PL-OBJ fish 3SG give-APPL-DYN
 'He's giving them fish (as a service to someone else, probably the owner of the fish).'

For Arawakan Yukuna, malefactive (and connected to that relinquitive) are the only possible interpretations.

(37) Yukuna (Arawakan; Lemus Serrano 2020: 76)

- ri=éjě kujnú anó'-ña-cha na=i'michá.*
 3SG.NF=toward cassava wet-APPL-PST 3PL=REM.PST
 'Then their cassava got wet on them (i.e. to their detriment).'

The applicative marker in Iquito can also possibly be connected to this group. Since there is no dedicated description of this applicative marker, the interpretation of its semantics must be based on example sentences, of which there are few. The semantic interpretation seems to hinge around the notion of benefactive/goal (see [26] above), but allows for some freedom of interpretation, as shown in (38), where the combination *carii* 'look' with *-nii* yields different (though relatable) interpretations.

- (38) Iquito (Zaparoan; Lai 2009: 299, 301)
- a. *caniica pi-mayasiini carii-nii-rü?*
 who 1PL.INCL-play.INF look-APPL-MOM.PFV
 'Who will direct our game?'
 - b. *carii-nii nuu!*
 look-APPL 3S
 'Take care of him!'

A second, smaller group of markers hinge around (sociative) comitative semantics. For Arabela, Rich (1975: 2) describes a suffix *-ta*, which marks a sociative causative (but termed applicative in Rich 1999), introducing an accompanying person or thing for the patient of a transitive or the S of an intransitive verb, with a range of interpretations. Rich (1999: 55–57) lists three types of interpretation, which he terms passive accompaniment (39a), temporary condition for the subject participant (39b), and contents of subject or object participant (39c).

- (39) Arabela (Zaparoan; Rich 1999: 55–57)
- a. *cua morejaca tiurii-tia-ree-nijia.*
 1SG yuca trip-APPL-PFV-1SG
 'I tripped with my load (yuca).'
 - b. *Najaaca cuso-ta-a-nijia.*
 flu be.sick-APPL-CNT-1SG
 'I am ill with the flu.'
 - c. *Cana-qui-ti-jia canaa*
 who-EXCLM-INTER-EXCLM 1PL.EXCL
caashoque ti-ni-jio-ta-ree-jaj?
 bag fall-CAUS-VPL-APPL-PFV-EMPH
 'Who knocked over our bags (with content)?'

This is semantically rather close to some of the readings of *-ta* in Yagua:

- (40) Yagua (Peba-Yaguan; Doris L. Payne 1985^a: 272)
- a. *sa-ya-ta jüta-ní juvqda*
 3SG-go-APPL DISC.PRT-3SG kill[noun]
 'He goes with his kill.'
 - b. *sa-tiryóó-ta-rà*
 3SG-lie:down-APPL-INAN
 'He lies down with it (e.g. a book).'

Shawi has a sociative causative construction, marked with the prefix *ichi-*, which serves a similar function as Shiwilu *ek-*:

- (41) Shawi (Kawapanan; Rojas Berscia 2013: 92)
ka ichi-nansa-r-awe ina
 I SOC.CAUS-dance-ASSIST-1SG him
 'I make him dance (but I also participate in the dancing).'

- (42) Shiwilu (Kawapanan; Valenzuela 2016: 527)
Rubisha ek-lansa'-llun (kwa)
 Robertina SOC.CAUS-dance-NFUT.3SG>1SG 1SG
 'Robertina asked me to dance and we both danced.'

A more idiosyncratic interpretation of *ek-* in Shiwilu can be translated as 'wearing', the applied object being a piece of clothing associated with one of the participants of the action. This is reminiscent of the examples in Arabela (39) and Yagua (40) above.

- (43) Shiwilu (Kawapanan; Valenzuela 2016: 528)
 a. *Atushupi chimin-lli*
 Augusto die-NFUT.3SG
 'Augusto died.'
 b. *Atushupi ek-chimin-lli kutun=nen.*
 Augusto SOC.CAUS-die-NFUT.3SG>3SG clothes=POSS.3SG
 'Augusto died in his clothes (i.e., in the clothes that he is wearing).'

A further applicative marker of Shiwilu, *-pa*, which can be used to indicate a participant next to whom an action is performed, can also take on more comitative and assistive meanings, as shown in (44).

- (44) Shiwilu (Kawapanan; Valenzuela 2016: 533)
 a. *Malallina nerku'-lli nun=kekla.*
 Magdalena row-NFUT.3SG canoe=ABL
 'Magdalena rowed from the canoe.'
 b. *Malallina nerku'-pa'-llun.*
 Magdalena row-APPL-NFUT.3SG>1SG
 'Magdalena helped me row (i.e., we both rowed).'

Semantic extensions of Shiwilu *ek-* and Yagua *-ta* are closer to a dative-like interpretation, akin to the semantics of Iquito *-nii*.

- (45) Shiwilu (Kawapanan; Valenzuela 2016: 528)
ñiñi'wa=pen ek-pekla-llun
 dog=POSS.2SG SOC.CAUS-produce.noise-NFUT.3SG>1SG
 'Your dog barked at me.'

- (46) Yagua (Peba-Yaguan; Doris L. Payne 1985a: 278)

sa-júnúúy-ta-níí *dee-un*
 3SG-look-APPL-3SG DIM-CLF:ANIM:SG
 ‘She watches/takes care of the boy.’

The Yagua marker in addition can yield instrument interpretations, as illustrated by (27) above.

A third group that occurs in more than one family are locatives. Shiwilu has an applicative marker *-tu*, which promotes a locative argument to core argument status:

- (47) Shiwilu (Kawapanan; Valenzuela 2016: 534)

- a. *Peksek wichi’-lli*.
 peksa’=ek wichi’-lli
 bed=LOC sleep-NFUT.3SG
 ‘He slept in the bed.’
- b. *Peksa’ wichi’-tu-lli*.
 bed sleep-APPL-NFUT.3SG>3SG
 ‘He slept in the bed.’

A further applicative marker in Shiwilu, *-wa*, in combination with *-tu*, marks the goal of a movement:

- (48) Shiwilu (Kawapanan; Valenzuela 2016: 540)

napi’=ima ala’=sa’ shaya’ Kukama’-lun=ima
 long.ago=REP one=just man’s.older.sister Cocama-F=REP
Tandek=k ñi-apa-sik=ima
 Marañón.river=LOC exist-CNT-DUR.3SG=REP
pa’-wa-tu-lli ala’=sa’ wapur=ler
 go-APPL-VM-NFUT.3SG>3SG one=LIM boat=ERG
 ‘Long ago a boat came towards a woman, a Cocama woman, who was living on the (banks of the) Marañón (river).’

A locative interpretation is also possible in Chicham languages, although this particular instance of the applicative marker is best classified as a lookalike. In Shiwiar, with verbs of motion, the applicative marker can introduce a locative argument, as exemplified in (49).

- (49) Shiwiar (Chicham; Kohlberger 2020: 299)

ukú-r-ki-ár-mia-ji
 leave-APPL-PFV-PL-REM.PST-3.DECL
 ‘They left her there.’

The verb root *ukú* ‘leave’ in (49) is transitive; the applicative shifts the focus to a location. Kohlberger stresses that it is unclear that the applicative increases valency in these cases, since there is never an explicit NP referring to the location, and third person objects are not formally marked on the verb.

This is reminiscent of the situation in the Arawakan language Tariana. Strictly speaking, Tariana does not have an applicative construction, but certain uses of the causative *-ita* can be classified as applicative lookalikes. When applied to transitive verbs (except a small subset), the marker combination *-ita* indicates that a peripheral participant must be present in the clause (although it does not seem to be treated as a core argument morphosyntactically). The precise interpretation of this peripheral participant depends on the verb semantics, but one of the possible interpretations is a locative (50), other interpretations are dative (addressee/benefactive), instrument, or purpose.

(50) Tariana (Arawakan; Aikhenvald 2000: 166)

- a. *diwhida na-pisa na-pala-pidana*
 3SG.NF+head 3PL-cut 3PL-put-REM.PST.INF
 ‘They cut his head and put (it) somewhere.’
- b. *ita-whya hi-nuku pi-pale-ta*
 canoe-CLF DEM:AN-TOP.NON.A/S 2SG-put:CAUS-CAUS
 ‘Put the canoe here.’

In Example (50a), the verb stem *pala-* without the causative means ‘to get’ or ‘to put’; with the causative marker¹³ the stem means to put something in a particular location (50b).

Shiwilu has a number of further applicatives or further readings of the applicative markers discussed above. The first marker (*-tu*, homophonous with the locative applicative) to be discussed is not classified as an applicative marker by Valenzuela (2016), because it clearly has uses that are not applicative. Depending on the verb¹⁴ it attaches to, it may have valency-decreasing or -increasing effects. The latter can be interpreted as applicative constructions that add a (direct or indirect) object. Example (51a) shows the valency-increasing effect of *-tu*, adding an addressee to the verb *lamapu* ‘scream’, changing the interpretation to ‘scream at’. In (51b), the same marker decreases the valency of the transitive verb *apu-* ‘abandon’, to derive an intransitive interpretation ‘disappear, go away’, where the former direct object is expressed as an oblique.

¹³ The causative marker *i-ta* is bimorphemic, with the *-i* (here merged with the stem) representing the causation, and *-ta* an increased affectedness of the P participant (Aikhenvald 2000: 158–159)

¹⁴ The marker also attaches to adjectives or nouns to form verbs.

(51) Shiwilu (Kawapanan; Valenzuela 2016: 524–525)

- a. *nana shaya' sudinen lamapu'-tu-lli.*
 that man's.sister husband:POSS.3SG scream-VM-NFUT.3SG>3SG
 'The woman screamed at her husband.'
- b. *Iñika apu'-tu-lli pidek=ñiklan.*
 Inés abandon-VM-NFUT.3SG house=POSS.3SG:ABL
sudin apu'-lli.
 husband:POSS.3SG abandon-NFUT.3SG>3SG
 'Inés disappeared from her house. She abandoned her husband.'

Shawi has a cognate marker *-të* (pronounced /ti/ or possibly /tu/, with allomorph *-ta* in combination with progressive verb semantics). Hart (1988) describes three functions of the suffix *-të*: valency-increasing (52a–b), deriving a personal from an impersonal verb (52c), and valency-decreasing (52d). Example (52b) can be classified as an applicative use of *-të*.

(52) Shawi (Kawapanan; Hart 1988: 269)

- a. *amarin* 'He bathes.' vs. *amatërin* 'He bathes someone.'
- b. *a'parin* 'He sends it.' vs. *a'patërin* 'He sends it to someone.'
- c. *të'narin* 'It gets cold.' vs. *të'natërin* 'He gets cold.'
- d. *nohuirin* 'He is angry with someone.' vs. *nohuitërin* 'He is angry.'

Interestingly, Rojas Berscia (2013: 50) indicates that, for the Balsapuerto dialect he was studying, most of the examples mentioned by Hart (1988) could not be corroborated. Instead, he found that the suffixes of the same form were used as tense markers.

The relinquitive applicative marker *-lapi* in Shiwilu is also found in constructions that are interpreted as comparative (surpassing) or prioritive (beating someone to it), which are possibly semantic extensions of the relinquitive. There is a further applicative marker *-nan*, which marks applied objects in the presence of whom an action was performed, sometimes with malefactive overtones. The same marker can also be interpreted as referring to a participant who is spared, in contrast to other participants, who are affected by the action. Valenzuela (2016: 542) notes that this applicative interpretation is unique.

Summarizing, there are a number of recurring semantic roles assigned to the applied object in the area. The most common ones are benefactive and malefactive, with comitative-like interpretations and locations as two further recurring, but clearly less common groups.

4 The areality of applicative constructions in the northwest Amazon

After having reviewed the morphology, syntax, and semantics of the applicative constructions found in the NWA, we can return to the question to what extent the distributions found can be explained by making reference to contact.

A first point to be made here is that the area, in some ways, seems to be the opposite of an “applicative area”. Only about half of the languages in the sample under investigation in this paper have applicative constructions. In addition, of the languages that do have applicatives, the most common situation is that there is only one applicative marker, Shiwilu being the exception. The Quechuan and Arawakan languages of the area, moreover, mostly or entirely lack applicatives, unlike other languages belonging to the same family, but spoken in other areas. For Quechuan languages, as mentioned, this may be a contact effect (substrate, possibly from Barbacoan), for Arawakan this is less clear. Two Arawakan languages in the area do have applicative or applicative-like markers, Tariana and Yukuna.

In terms of their morphology, the applicative markers in the NWA are overwhelmingly suffixal, with a few exceptions (prefixes in Kawapaman); with respect to the specific forms, the most conspicuous commonalities are family-internal, in particular for Tukanoan and Chicham, suggesting established patterns prior to diversification. There are a few other similar forms, which may be discussed in the light of the idea that a marker *-ta* spread through the area (Crevels and Voort 2020). A few markers discussed above expressing applicative or applicative-like constructions have a form that can broadly be connected to the form [ta].

Table 5: Forms similar to [ta] in the sample.

form	language	meaning
<i>-tu</i>	Aguaruna	benefactive, malefactive, locative
<i>-tu</i>	Wampis	benefactive, malefactive, locative
<i>-tu</i>	Shiwiar	benefactive, malefactive, locative
<i>-tu</i>	Shiwilu	locative
<i>-(i)a</i>	Arabela	comitative
<i>-ta</i>	Yagua	comitative, instrument
<i>-ita</i>	Tariana	benefactive, malefactive, locative, instrument, purpose (lookalike)

At first sight, the form-meaning pairs in Table 5 look promising: there is certainly formal similarity, and this seems to be coupled to some degree of functional overlap as well. However, although there certainly may be contact-induced aspects to be discerned, the formal similarities seem to be mostly accidental. The Chicham form *-tu* is an allomorph

of *-hu* (Aguaruna) or *-ru* (Wampis, Shiwiar). This is the same allomorphy as the first person singular object, lexically determined by the same group of verbs. Although the diachrony of this allomorphy is unclear (Overall 2007: 322–324), it is obvious that there is a diachronic connection, which points to an internal development of the form *-tu*, at least since the time of diversification. Of course, it is possible that the allomorphy (an uncommon feature in Chicham languages) is contact-induced, caused by the borrowing of a form at a stage before the diversification of the Chicham languages, which, given the similarities between the Chicham languages, does not lie too far back in the past.

The locative applicative *-tu* in Shiwilu has a diachronic connection to the valency-adjusting suffix *-tu* (*-të* in Shawi). This suffix can manipulate the valency of a verbal root, with either decreasing or increasing effects. The interpretation of the marker depends on the verb root it attaches to, and it is therefore difficult to ascribe any specific semantics to it. The presence of a cognate in Shawi suggests the presence of the marker in a stage before the split between Shawi and Shiwilu.

Given its form, it is enticing to regard the Tariana applicative in the light of the spread of *-ta* forms, discussed in Crevels and Voort (2020). It must be said, however, that the applicative reading is only one of the functions of *-ita*, and probably a secondary one, as its main function is causative. As a causative marker, forms related to *-ita* are found throughout the Arawakan family, and seems to be inherited from proto-Arawakan, see Aikhenvald 1999: 90). For the forms in the sample of this paper, see Table 6.

Table 6: Causative morphology in northwestern Arawakan languages.

Language	Causative morpheme	Source
Achagua	<i>-da</i>	Wilson and Levinsohn (1992)
Tariana	<i>-ita</i>	Aikhenvald (2003)
Piapoco	<i>-ida</i>	Klumpp (2019), Reinoso Galindo (2002)
Resígaro	<i>-tú</i>	Allin (1976)
Warekena	<i>-ta</i>	Aikhenvald (1998)
Yukuna	<i>-ta/-chi</i>	Lemus Serrano (2020)

That leaves us, as far as formal borrowing is concerned, with the case of Yagua and Arabela, which was discussed in Section 3.2, based on the observations made in Payne (1985b) and Wise (2002).

It is, however, possible that some of the language-internal developments were influenced by language contact, and that formal similarities may have helped these processes along. For instance, the development of a locative interpretation of the valency modifier in Shiwilu may have happened under the influence of the presence of a homophonic applicative suffix in the Chicham languages, and the extension of the causative in Tariana may have been influenced by the presence of similar sounding applicative markers in neighboring languages. Likewise, the extension of the Koreguaje applicative to include malefactive may have been contact-induced (with perhaps the Chicham lan-

guages as the most likely source). This is, however, hard to prove or disprove. We know that Tariana was influenced particularly by East Tukanoan languages, which have no applicative marker that is formally similar. A connection between Kawapaman and Chicham has been suggested (Valenzuela 2015) and therefore seems more promising.

The Kawapaman-Chicham connection also surfaces when looking at the syntactic patterns, where both languages have a system in which applicative arguments have prioritized access to the object indexing slot on the verb over direct objects. The other shared syntactic pattern worth mentioning here is the fact that in both Hup (and possibly Kakua) and Tukanoan languages, the applicative argument is in most cases not subject to differential argument marking, unlike direct objects. Given the known shared history between Hup and Eastern Tukanoan languages (Epps 2006) both the system of differential object marking, and the exception to this of applied objects, may be contact-induced influence of Tukanoan on Hup.

The Yagua-Arabela connection is reinforced by semantics, both languages having readings that include the extension of the effects of the event on objects in the possession of, or physically associated with the S or P participant. This may be extended to some of the uses of Shiwilu *ek-*, which can promote clothing worn by the S or P participant. A further interesting venue to look into on the basis of semantic correspondences (but outside the scope of this paper) is historical connections between Shiwilu and the languages of central and southern Peru. The Arawakan language Nanti, for instance, has a presential (53a) and relinquitive (53b) applicative, semantically similar to the corresponding Shiwilu applicatives:

(53) Nanti (Arawakan; Michael 2008: 286–287)

- a. *Birari tog-imo-ak-i=npi*
 Birari fell.tree-APPL-PFV-REAL=2OBJ
 ‘Birari felled (it) in your presence.’
- b. *i=shig-apitsa-ak-i=ri*
 3MS=run-APPL-PFV-REAL=3M.OBJ
 ‘He ran away from him.’

In sum, there seems to be little (and at best tentative) evidence for contact-induced diffusion of forms in the applicative systems of the NWA languages of the sample beyond the already recognized connection between Yagua and Arabela *-ta*, which is also supported by overlapping semantics. There are some indications of contact-induced influence concerning Kawapaman and Chicham languages, as well as between Hup and Tukanoan languages, but these—with the possible exception of Kawapaman and Chicham—involve semantics or syntax rather than form. An interesting avenue for further research is the connection between Shiwilu and Nanti (as well as perhaps further languages of central and southern Peru).

5 Conclusions

The use of applicatives in the NWA is limited. Many languages of the area have no applicative construction, even if related languages spoken elsewhere do. The languages that do have an applicative construction, mostly have only one. The exceptions are Kawapangan languages Shawi, and in particular Shiwilu, which have a richer inventory of applicative constructions.

Beyond this, a few generalizations can be made about applicatives in the area on the basis of the overview given above:

- Almost all applicative markers are prosodically dependent, postposed markers, mostly suffixes (exceptions are prefixed markers in the Kawapangan languages which occupy a middle ground between causatives and applicatives).
- There is some overlap in form, but on closer inspection, these overlaps are largely coincidental (the main exception seems to be the applicative marker *-ta* in Yagua and Arabela).
- In terms of morphosyntactic marking of the applied object, languages tend to follow the internal logic of marking direct or indirect objects of non-derived verbs. Two patterns are worth highlighting:
 - In Hup and the Tukanoan languages, applied objects are generally not subject to differential case marking, unlike direct objects (but like indirect objects).
 - In Chicham and Kawapangan languages, applied objects are given priority access to the object indexing slot on the verb over direct objects.
- In terms of semantics, affective (benefactive-malefactive) is clearly the most common interpretation of the role of the applicative object, followed by a group of interpretations that can be loosely connected to the notion of comitativity, and finally locations.

Abbreviations

ABL	ablative
ACC	accusative
AN	animate
ANPH	anaphor
APPL	applicative
ASSIST	assistance
ATT	attenuative
BEN	benefactive
CAUS	causative
CLF	classifier
CNT	continuative
COLL	collective
COM	comitative

COP	copula
DECL	declarative
DEF	definite
DEM	demonstrative
DES	desiderative
DIM	diminutive
DISC	discourse
DS	different subject
DUR	durative
DYN	dynamic
EMPH	emphasis
ERG	ergative
EXCL	exclusive
EXCLM	exclamative
F	feminine
FUT	future
HIAF	high affectedness
IMP	imperative
INAN	inanimate
INCL	inclusive
IND	indicative
INF	inference
INSTR	instrument
INT	intentional
INTER	interrogative
INTS	intensifier
IPFV	imperfective
LIM	limitative
LOC	locative
M	masculine
MOM	momentary
MOT	motion
NEG	negation
NF	non-feminine
NFUT	non-future
NMLZ	nominalizer
NON.A/S	non-subject (A/S) argument
OBJ	object
PFV	perfective
PL	plural
POSS	possessive
PRED	predicative
PRES	present
PRO	pronominal
PRT	particle
PST	past
REAL	realis
REC	recent
REL	relativizer

REM	remote
REP	reportative
SEQ	sequential
SG	singular
SOC	sociative
SRC	source (of action)
SS	same subject
SUB	subordinator
TOP	topic
VAL	valenciator
VLZ	verbalizer
VIS	visual
VM	valency modifier
VPL	verbal plural
x>y	x acts on y

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