

Dissertation for the Degree of Doctor

Toward a diachronic typology of
applicative constructions

by

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Abstract

This study, in order to be a contribution to the diachronic typology of applicative constructions, aimed to find possible correlations between diachronic sources of applicatives and synchronic statuses of the applicatives as described in the modern time, and how different patterns of diachronic processes are theoretically possible or are attested to form various aspects of the applicatives, with 50 sample languages which have applicative constructions. First, applicative systems in particular languages in a diachronic perspective, in which diachronic models were presented and discussed of how the number of applicative markers in a language and the number of meanings of each applicative marker can develop. It was also suggested that, if a language has only one applicative marker, it is not likely to have an adpositional origin. Second, focusing on the aspect of applicative markers related to word order patterns, it was observed how many applicative prefixes develop from postpositions, and how many applicative suffixes develop from prepositions or verbs, even leading to the correlation between applicative marker types and word order patterns whereby languages with applicative prefixes harmonize with VO order and languages with applicative suffixes are equally attested with both VO order and OV order. Then, it was attempted to capture historical backgrounds of optional applicative constructions and obligatory applicative constructions in a consistent way. First of all, for optional applicatives, how differences in diachronic sources of applicative markers could result in different pathways to reach the optionality of the applicative markers, in interaction with the diachrony of semantically compatible non-applicative strategies. Also, optional applicatives were divided according to the ways in which promotions of applied arguments occur: obligatory, optional, or impossible, and historical relatedness between an applicative marker and its semantically compatible non-applicative strategy were discussed as a possible diachronic factor determining obligatoriness, optionality, and impossibility of promotion in applicativization. For obligatory applicative constructions, after discussing the distinction of obligatory applicative constructions according to in what way the applicativization is obligatory: fully-obligatory or conditionally-obligatory, how differences in diachronic sources of applicative markers could result in different pathways to reach the obligatoriness of the applicative markers, in interaction with the diachrony

of semantically compatible non-applicative strategies, in a similar way done for optional applicative constructions. It was suggested that applicative markers of non-adpositional origins could be more likely to be obligatory than those of adpositional origins. After that, based on the fact that optionality and obligatoriness of applicative markers are historically in a cyclic relationship, the possible diachronic scenarios reaching the status of optionality and obligatoriness of applicative markers presented in the preceding chapters were brought together, and more scenarios theoretically possible were added, so that a whole picture capturing the rise and fall of optional and obligatory applicative markers was gained. Finally, what historical conditions allow multiple applicativization were discussed, in which a few tentative proposals were presented.

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List of abbreviations

ABL	ablative
ADV	adverb
ALL	allative
AN	antipassive
ANIM	animate
AOR	aorist
AP	applicative
APP	applicative
APPL	applicative
APPLIC	applicative
ART	article
ASC	associative case suffix
ASSOC	associative
ASP	aspect
ASRT	assertive
ASSOC	associative
AUX	auxiliary
AV	active
BEN	benefactive
CAUS	causative
CL	classifier
CNJ	conjunction
CMPL	complete
COM	comitative
CONJ	conjunctive
CONN	connective
CONV	converb
COP	copula
CSTR	construct marker
D	gender agreement marker (Chechen-Ingush)
D	discourse marker (Maasai)
D2	distal deixis
DAT	dative
DEC	declarative
DECL	declarative
DEF	definitive
DEM	demonstrative
DES	desiderative
DISC	discourse particle
DK	associated motion marker
DF	definitive
DIR	direction
DO	direct object
DR	downriver relation

DS	different subject
DUR	durative prefix
DYN	dynamic
DX	deictic prefix to verb
E	Spanish
EH	hearsay evidential
ERG	ergative
EV	direct evidential
EX	exclusive
F	female
FAR	far past
FOC	focus
FUT	future
FV	final vowel
G	genitive
GEN	genitive
I	instrumental
IMP	imperative
INC	incompletive aspect
INCMPL	incomplete
INCP	inceptive
IND	indicative
INDEF	indefinitive
INF	infinitive
INFR	inferred
INS	instrumental
INST	instrumental
INSTR	instrumental
INTR	intransitive
IO	indirect object
IMPF	imperfective
IPFV	imperfective
IRR	irrealis
LAT	lative
LGR	lengthened grade (for eventive aspect)
LOC	locative
M	masculine
MAL	malefactive
MAN	manner
MANN	manner
MID	middle
N	nominative
NAR	narrative register
NEG	negative
NF	nonfuture
NFUT	nonfuture
NMLZ	nominalizer

NOM	nominative
NOMZR	nominalizer
NP	noun phrase
NP _x	noun prefix of class x
NONPROX	nonproximate
NPROX	nonproximate
NPST	nonpast
NRP	narrative past
O	direct object (Kolyma Yukaghir)
O	object
OBJ	object
OBL	oblique
OM	object marker
P	plural
P	previous event (Shipibo-Konibo)
PA	past
PL	plural
PERF	perfective
PF	perfective
PFV	perfective
PL	plural
PON	ponent
POS	possessive
POSS	possessive
PP1	incomplete participle
PP2	completive particle
PR	present
PRES	present
PROG	progressive
PRS	present
PRV	preverb
PS	time reference: optional past tense marking
PSP	postposition
PSR	possessor
PST	past
PUR	purpose
PURP	purpose
PV	preverb
R	realis
REAL	realis
REC	recipient
RECP	recipient
REL	relativizer
REM.P	remote past
S	subject
SUBJ	subject

SUPRESS	suppressive
SG	singular
SG	singular
SJ	subject case suffix
SM	subject marker
SOC	sociative
SS	same subject marker
SSSA	simultaneous event, same-subject
SUB	subject
SUBJ	subject
T	transitive
T	tense (Kaqchikel)
TEMP	temporal prefix
TNS	tense
TOP	topic
TR	transitive
TRR	transitivizer
V	vowel
VAUX	augment vowel on nouns
VBLZ	transitive verbalizer
VCOM	verbal comitative
VI	verbal stem marker
VINST	verbal instrumental
VS	verbal stem marker
VY	verbal stem marker
WP	witnessed past tense
1	first person
2	second person
3	third person

1 Introduction

1.1 Goals of the study

The best known definition of applicative constructions is the one by Peterson (2007):

(1) Applicative constructions

a means some languages have for structuring clauses which allow the coding of a thematically peripheral argument or adjunct as a core-object argument. Such constructions are signalled by overt verbal morphology.

(Peterson 2007: 1)

Consider the following example from Wolof. Although (2a) and (2b) have the same basic propositional meanings, they are morphosyntactically different: “with a spoon” is expressed as an adjunct with the preposition in (2a), while it is expressed as a core-object argument owing to the applicative suffix in (2b). (2b) is an applicative construction. NPs made core arguments in applicative constructions, like *kuddu* ‘spoon’ in (2b), are generally called “applied objects” or “applied arguments”, and I will adopt “applied arguments”. (2b) is a result of *ag kuddu* in (2a)’s undergoing “promotion”. Also, in the sense that applicative constructions typically have one more core-argument than the original constructions, it is often characterized as “valency-increasing” operation or something adding an object into the argument structure.

(2) Wolof (Niger-Congo; Senegal/Gambia/Mauritania)¹

- a. *mungi* *lekk* *ag* *kuddu*
PRES.3SG eat with Spoon
‘He is eating with a spoon.’

(Comrie 1985: 318)

¹ Throughout the study, applicative markers appearing in examples, and, when preferable (according to relevance), markers of the applied arguments (or some other things) as well, will be in boldface. Speaking of glosses, I tried to leave as many parts as possible as what they are in the sources but modified some (e.g., small letters > capitals) in ways not changing the essence.

- b. *mungi lek-e kuddu*
 PRES.3SG eat-APPL spoon
 ‘He is eating with a spoon.’

(Comrie 1985: 318)

Another example is from Winnebago. (3a) and (3b) express the same propositional meanings, (3a) using a postposition strategy and (3b) an applicative strategy for the locative argument:

(3) Winnebago (Siouan; Midwestern United States)

- a. *kook-eja naanzhin-je-enan*
 box-LOC stand-AUX-DECL
 ‘It is standing in the box.’

(Craig & Hale 1988: 314,328)

- b. *kook-ra ho-nanzhin-je-enan*
 box-DEF INESSIVE-stand-AUX-DECL
 ‘It is standing in the box.’

(Craig & Hale 1988: 314,328)

The applied argument is not necessarily expressed by an overt free NP, but it may be identified by means of person marking or zero anaphora. For the Rama applicative prefix *ka-*, zero anaphora is possible, as in (4b), in which the applied argument is not overtly determined as in (4a):

(4) Rama (Chibchan; Nicaragua)

- a. *naing taata ka na-ngalbi-u*
 my father PSP/from 1-run-TNS
 ‘I ran away from my father.’

(Craig 1990: 127)

- b. *ka-na-ngalbi-u*
 RP/from-1-run-TNS
 ‘I ran away from him.’

(Craig 1990: 127,132)

The following Dholuo example (5b) may be seen as an applicative construction with the

suffix *-ni* an applicative marker whose applied argument is expressed by the person-marking suffix *-e*. This has the same verb and the same thematic structure as the non-applicative (5a).

(5) Dholuo (Nilo-Saharan; Kenya/Tanzania)

- a. *Otieno o-kele ni Odhiambo kitabu*
 Otieno he-bring to Odhiambo book
 ‘Otieno has brought a book to Odhiambo.’

(Stafford 1967: 16)

- b. *okelone kitabu*
o-kele-ni-e kitabu
 he-bring-to-him book
 ‘He brings him a book.’

(Stafford 1967: 16)

As discussed in Peterson (2007), there are more parameters that are applicable to applicatives according to which the variations of applicative constructions arise. These cover parameters concerned with morphophonology, syntax, or semantics, including: marker type of the applicative marker, semantic role of the applied argument, etc. For example, in the Wolof case cited above in (2), the marker type of the applicative marker is “suffix”, and the semantic role of the applied argument is “instrument”. Other languages with applicatives and other Wolof applicative constructions show different values for those parameters. In fact, the Winnebago, Rama, and Dholuo examples above instantiate applicativization of inessive, source, recipient semantic roles respectively, for each of which an applicative prefix or an applicative suffix is used. In that way, applicative constructions differ in several aspects from language to language or even within a language.

The present study is an attempt to approach the typology of applicatives from diachronic perspective. There are some studies that present general pictures of applicative constructions in typological perspectives (Palmer 1994; Payne 1997; Creissels 2006; Peterson 2007; Kiyosawa & Gerdtz 2010; Dixon 2012; Polinsky 2013; Song 2018; Zúñiga & Kittilä 2019). They discuss applicative constructions in general in terms of different parameters that yield the cross-linguistic diversity of applicative constructions. However,

what they primarily provide are synchronically-oriented discussion, and the parameters have not been received a typological discussion in diachronic terms. A kind of diachronic typology of applicative constructions was made in a chapter of Peterson (2007: 123-171) with the title of “evolution of applicatives”. Although Peterson (2007) succeeded in pioneering the diachronic approach to the typology of applicatives, the following points of it have some rooms for further studies. The first point is concerned with which aspects of applicative markers or constructions are to be discussed in terms of diachrony. As mentioned above, applicative constructions have several aspects or several parameters. However, although Peterson (2007) provides plentiful discussion for some of such parameters in synchronic terms, it lacks discussions of each of the individual parameters in diachronic terms. Rather, Peterson’s objective is the diachrony of individual applicative markers or constructions as a whole, like their historical origins. For example, while distinguishing different types of sources of applicative markers including adpositions, verbs, and nouns, Peterson (2007) does not distinguish different types of applicative markers: applicative prefixes or applicative suffixes or others.

The second point is concerned with in what sense a diachronic study is diachronic. Peterson’s diachronic typology is diachronic in the sense that it discusses with examples what kind of diachronic sources an applicative marker can come from (Peterson 2007: 123-141) and which grammatical category an applicative marker might further develop into, for example, relativizer or nominalizer (Peterson 2007: 151-169). Peterson (2007: 141-151) discusses factors and motivations for developments of applicative constructions in discourse from a functional perspective and points out that “continuity-motivation” is an important nature of applicative markers when discourse functions are taken into account. That is, he considers that arguments get easier to be a topic in the whole discourse where it occurs when they are applicativized and thereby marked as direct objects, by getting able to be relativized or passivized. Meanwhile, he does not discuss very much the concrete processes or mechanisms of grammatical changes whereby diachronic sources end up as applicative markers in such a way, for example: how diachrony determines whether as a prefix or as a suffix an applicative affix develops.

Peterson’s discussion of from what kinds of sources applicative markers may come can be supplemented with some word classes or grammatical categories that later workers on individual languages newly proved as potential sources of applicatives. In that way,

what is known about the diachrony of applicative constructions to date is almost equivalent to the possible sources of applicative markers and in what languages each is demonstrated. Now, these will be briefly introduced, because, as mentioned above, diachronic sources of applicative markers play major roles in many of the diachronic explanations that will be made in the present study. Concrete mechanisms whereby each kind of diachronic sources become applicative markers will be discussed in the main part of the present study. First of all, as discussed in Peterson (2007: 125-129), adpositions are one of the major sources of applicative markers². An example I recognize is Dakota, in which, as Riggs (2016 [1852]) suggests, the transparent basis supports that the applicative prefix *kic'i-* (6b) derives from the free word *kici*, which is a postposition (6a):

(6) Dakota (Siouan; North Dakota/South Dakota)

- a. *he kic'i mde kta*
 him with I.go FUT
 'I will go with him.'

(Riggs 2016 [1852]: 60)

- b. *wowapi kic'i-caga*
 writing for-him.he.made
 'He wrote a letter for him.'

(Riggs 2016 [1852]: 17)

Another frequent source of applicative markers Peterson (2007: 130-140) discusses is verbs³. Barupu, discussed by Donohue (2003), can serve as an example of this, in which the applicative suffix *-ke* as appearing in (7b) could be originally the verb *ke* 'sit' as appearing in (7a), according to Donohue (2003: 138):

(7) Barupu (Skou; Papua New Guinea)

- a. *bio=venavena k-o-ke-i[sic] pita*

² Garrett (1990), Baker (1996: 431-432), Haspelmath & Müller-Bardey (2004), Creissels (2006: 79), and Zúñiga & Kittilä (2019: 222-223) also mention this origin in typological contexts.

³ Garrett (1990), Haspelmath (1995: 41-42), Baker (1996: 431), Creissels (2010), and Zúñiga & Kittilä (2019: 222-223) also mention this origin in typological contexts.

woman=witch R-<3SG.F>-sit down

‘The witch sat down.’

(Donohue 2003: 123)

b. *a k-u-ai-ke-ni*

rain R-3SG.F-rain-upon-1SG.F

‘It’s raining on me.’

(Donohue 2003: 122)

Although rarer than adpositions and verbs, nouns are also potential sources of applicative markers (Peterson 2007: 140-141). For example, in Ainu, among possible scenarios of the development of the applicative prefix *e-* is a possibility that it comes from the noun *he* ‘head’ (Bugaeva 2010: 762). Gerdtz & Hinkson (2004) also discuss a nominal origin of an Halkomelem applicative prefix. Adverbial origins are also possible: Peterson (2007: 131) mentions a Yimas example from Foley (1991: 339) which has an applicative prefix coming from an adverb⁴. Finally, there are cases in which causative markers, which may date back to verbs, were reanalyzed as applicative markers (Song 1996; Shibatani & Pardeshi 2002; Peterson 2007: 133-140), like the Swahili causative-instrumental suffix *-iish* (Song 1996: 94). In sum, adpositions, verbs, nouns, adverbs, and causativizers, as sources of applicative markers, are all covered in Peterson (2007)’s discussion. Beside them, some categories were recently reported to possibly be sources of applicative markers in certain languages: classifier (Rose 2019), pronoun (Queixalós 2010: 43), locational copula ‘be.at’ (Klamer 2018: 239).

In that way, there is a good progress in detecting the kinds of diachronic sources of applicative markers and their basic mechanisms. However, it remains an uncultivated area to explore how the differences in the kinds of the diachronic sources and the mechanisms determine the differences in individual aspects of the resultant applicative markers or constructions. Given that situation, the present study will characterize itself in the following ways.

The present study aims to examine the relationship between the way applicative markers or constructions are and their history. This will be done with the spirit that differences and similarities of applicative constructions in terms of each parameter could

⁴ Haspelmath & Müller-Bardey (2004: 1142) also mention this origin.

be attributed to differences and similarities of the history of the applicative markers and constructions. Furthermore, it should be stressed that what to be explained is individual aspects of applicative markers or constructions, instead of applicative markers as a whole. This is compatible with the fact that different historical effects are manifested in each of distinct parameters of applicatives. To do so, in addition, it is necessary to focus more on the specific historical processes or mechanisms whereby each kind of diachronic sources end up as applicative markers. It should also be noted that knowing diachronic sources of applicative markers as discussed in Peterson (2007) matters for the present study as well, since the assumption is that different diachronic sources inevitably tend to undergo different historical processes before becoming applicative markers.

The purpose of uncovering the relationship between the diachronic sources and their resulting applicatives will be realized in the two following forms:

The first is finding universal correlates between synchronic properties of applicative constructions and their diachronic backgrounds. If common grammatical categories in different languages have diachronic sources which are common in kind, then, one will find similar pieces of trace or Hopper (1991: 22)'s persistence among those grammatical forms. For instance, it is cross-linguistically observed that adpositions deriving from verbs are likely to have verbal properties like person marking, which are inheritance from their source verbs (Hagège 2010), unlike adpositions deriving from other kinds of sources, such as nouns. This can be exemplified by the verb-like preposition *ako* in *Tukang Besi*: that *ako* takes the object suffix (or person marker) *-e* as in (8) signifies that it was originally a verb.

(8) *Tukang Besi* (Malayo-Polynesian; Indonesia)

no-wila kua daoa ako-e
 3R-go ALL market do.for-3OBJ
 'They went to the market for her.'

(Donohue 1999b: 188)

Therefore, in similar ways, some correlates should be found in relationships between applicatives and their diachronic sources. For example, the *Tukang Besi* applicative suffix *-ako*, as appearing in (9) below, ultimately dates back to the verb *ako* 'do for' (Donohue 1999b), whose grammaticalization into preposition was illustrated in (8) above. What is

quite plausible is that, for example, as will be topic of Chapter 6, the reason why it is a suffix rather than a prefix is that its diachronic source, the verb-preposition *ako*, was placed after the main verb rather than before it, and similar kinds of explanation can be applied to cases of other languages.

(9) *Tukang Besi* (Malayo-Polynesian; Indonesia)

no-mo'aro-ako te bae (na amai)

3R-hungry-APPL CORE rice NOM 3PL

'They are hungering for rice.'

(Donohue 1999b: 64)

The second is establishing a universal model for linguistic change surrounding the development of applicative constructions. Applicative construction in a language may have different statuses according to their stage of evolution. Applicative constructions move from status to status through diachrony, and the pattern of the changes is more or less systematic. Therefore, it should be possible to conceive such universal models. How different languages suit different patterns depicted in the models will also be discussed. For example, this will be done for cyclic changes among different types of optional applicatives and obligatory applicatives

1.2 Applicatives in diachronic perspective

Now, how the diachronic data were collected and problems about collecting diachronic data will be discussed concerning the present study. For that, it is better to explain first how the synchronic data were collected, as diachronic typology presupposes synchronic descriptions.

The synchronic data were collected by two ways. The first is to look at literature that write about applicative constructions in the selected languages, such as descriptive grammars and other forms of sources that provide grammar descriptions⁵. The second is to make queries to an individual specialist or a native speaker of each of some languages in my sample. The latter was mainly done to complement information about

⁵ For some of the Ainu data, texts of the Ainu Sagas called *Yukar* were searched as well, to use as much data as possible that have never been used in linguistic analysis.

obligatoriness/optionality of applicativization and obligatoriness/optionality of promotion in optional applicativization, as the information the literature give regarding those parameters tend to be scanty. The problem in the synchronic side is that not every grammar of languages with applicative constructions provides sufficient information desired by the present study. Thereby, it could happen that some applicative marker turns out to be not given the value of a certain parameter in the source literature. Moreover, it is also possible that, there is no mention made about certain applicative phenomena in some languages despite the fact that the languages actually have them. Because there is no mention does not immediately mean that the property or phenomenon is absent. With that problem, I tried to make as good use of information available as possible.

The diachronic data were collected in the following way. Some applicative markers have clarified or hypothesized origins discussed in literature that provide synchronic data together with them, and the present study used that diachronic information, which was done, for example, about Dakota, Barupu, and *Tukang Besi* as in 1.1. The problem is that diachronic data are not available for every language whose synchronic data are available. In cases in which diachronic data are thus not available, it is sometimes possible to make inference about their diachronic backgrounds. For example, in cases in which the applicative marker apparently has a substantial phonological and semantic similarities, say, to an adposition, it is probable that the applicative marker derives from that adposition, which is all the more likely when word order patterns in that language is also consistent with the marker type of the applicative markers (this will be discussed in Chapter 6). The case of Yucatec Maya applies to this: although the source does not provide its diachronic information, the applicative suffix *-t* as in (10b) appears to be related with its semantically compatible preposition *ti'* as in (10a).

(10) Yucatec Maya (Mayan; Belize/Mexico)

- a. *táan u ts'íikil ti' u na'*
 PROG SBJ.3SG feel_angry LOC POSS.3SG mother
 'He is annoyed with / is scolding his mother.'

(Lehmann & Verhoeven 2006: 471)

- b. *táan u ts'íikil-t-ik u na'*

PROG SBJ.3SG feel_angry-TRR-INCMPL POSS.3SG mother

‘He is annoyed with / is scolding his mother.’

(Lehmann & Verhoeven 2006: 471)

Meanwhile, it is not necessary to know diachronic sources of all applicative markers included in the sample. Firstly, diachronic source is not the only diachronic information the present study intends to utilize. Others include, for example: whether an applicative marker has a somehow historically related adposition at all, and whether certain two or more applicative markers in a language are somehow historically related at all with each other. Such information, which is helpful for establishing certain universal models of diachronic change in applicatives and hypothesizing certain correlates between the diachrony and its resulting statuses of applicatives, is inferable from similarities/dissimilarities in their phonological shapes and meanings, not demanding the knowledge of what their ultimate common origin is.

There is another reason why it is not necessary to know diachronic origins of every applicative marker in investigation. The main means the present study intends to use to support its claims is qualitative, rather than being quantitative. This means that it is the theoretical naturalness or theoretical reasonability that plays a major role. This especially applies in the cases of the establishment of universal models. For, theoretically, there are inevitable patterns that can be counted for some diachronic processes. For example, how many applicative markers in a language which has two applicative markers underwent semantic extension has three possibilities: zero, one, or two, and similarly, whether an optional applicative construction, as will be introduced in 1.4 below, was originally optional or it was originally obligatory thereafter becoming optional has the two possible answers. In order to establish universal models with regards to diachronic changes in certain aspects of applicatives, the present study tries to capture all theoretically possible patterns, and exemplifies each pattern with sample languages where possible.

1.3 Language sample

To perform the study, out of languages with applicative constructions whose information I had access to, I selected 50 languages in such a way that languages with different genetic and areal backgrounds will be covered.

My sample languages are listed below, with information about their genetic

affiliations and geographical areas (in a similar fashion to in Dryer (1992)⁶), together with source literature referred to (major ones only). Although it can be seen that the selected languages have concentrated distribution in some particular areas and language families, this can be seen to some extent as “a scaled-down version” (Song 2018: 94) of the whole picture of distribution of applicatives in the world’s languages. How this is so is discussed below in some detail.

It can be seen that, from a geographic perspective, the sample languages do not show a very equal distribution but many of them are concentrated in the following six areas: Sub-Saharan Africa, Island Southeast Asia, Papua New Guinea, Australia, the Americas, and Caucasus, which is somewhat also the case for Peterson (2007)’s and Polinsky (2013)’s samples of languages with applicatives. From a genealogical perspective, Malayo-Polynesian languages, Niger-Congo languages, and Nilo-Saharan languages occupy a good proportion in the sample. This is due to the fact that applicatives themselves are not distributed evenly in the world, but how frequently applicatives are found highly depends on the area and language family⁷. I suspect that Malayo-Polynesian languages and Niger-Congo languages will possess the two hugest applicative resources of all the language families in the world⁸. In contrast, the idea seems to be shared by many researchers that the likelihood is very low that a given European or Mainland Asian language will have an applicative construction.

NORTH AMERICA (8 languages): Hualapai (Yuman-Cochimí; Arizona) (Ichihashi-Nakayama 1996), Maricopa (Yuman-Cochimí; Arizona) (Gordon 1986), Winnebago (Siouan; Midwestern United States) (Craig & Hale 1988), Dakota (Siouan; North Dakota/South Dakota) (Riggs 2016 [1852]; Adam 2019 [1878]), Southern Sierra Miwok (Yok-Utian; California) (Freeland 1951; Broadbent 1964), Creek (Muskogean;

⁶ Although Dryer (1992) integrates North America and Central America into one, I distinguish them.

⁷ Also, Dixon (2012: 294) estimates that only “no more than about a quarter of the world’s languages” have applicatives.

⁸ The three language families mentioned here: Malayo-Polynesian languages, Niger-Congo languages, and Nilo-Saharan languages, are monolithic language families themselves, contributing to their internal diversity deriving from the long histories of the applicatives spreading within themselves. Also note that languages belonging to different language families in the Americas share some areal features.

Oklahoma) (Martin 2000; 2011), Nez Perce (Sahaptin-Klamath; Idaho) (Rude 1991), Central Alaskan Yupik (Eskimo-Aleut; Alaska) (Miyaoka 2012)

CENTRAL AMERICA (5 languages): Rama (Chibchan; Nicaragua) (Craig & Hale 1988; Craig 1990), K'iche' (Mayan; Guatemala) (Campbell 2000), Yucatec Maya; Belize/Mexico) (Lehmann & Verhoeven 2006), Nahuatl (Uto-Aztecan; Mexico) (Andrews 1975), Southeastern Tepehuan (Uto-Aztecan; Mexico) (Willett 1981; 1991)

SOUTH AMERICA (7 languages): Kogi (Chibchan; Colombia) (Knuchel 2020), Kashibo-Kakataibo (Panoan; Peru) (Biondi 2018), Shipibo-Konibo (Panoan; Peru/Brazil) (Valenzuela 2010), Huallaga Quechua (Quechuan; Peru) (Weber 1989), Tariana (Arawakan; Amazonia) (Aikhenvald 2003), Katukina-Kanamari (Harákmbut-Katukinan; Amazonia) (Queixalós 2010), Mosestén (Mosestén-Chon; Bolivia) (Sakel 2004)

AFRICA (11 languages): Tandroy (Malayo-Polynesian; Southern Madagascar) (Nishimoto 2018), Amharic (Afro-Asiatic; Ethiopia) (Amberber 1997; 2000), Koyra Chiini (Nilo-Saharan; Mali) (Heath 1999), Kipsigis (Nilo-Saharan; Kenya) (Bii et al. 2014), Maasai (Nilo-Saharan; Kenya/Tanzania) (Lamoureaux 2004), Dholuo (Nilo-Saharan; Kenya/Tanzania) (Stafford 1967; Odero et al. 2017), Wolof (Niger-Congo; Gambia/Senegar) (Comrie 1985; Dione 2013; Harris 2015), Mbuun (Niger-Congo; Democratic Republic of the Congo [DRC]) (Bostoën & Mundeke 2011), Rwanda (Niger-Congo; Rwanda/DRC) (Kimenyi 1988), Swahili (Niger-Congo; East Africa) (Liu 2014), Herero (Niger-Congo; Namibia/Botswana) (Yoneda 2009)

SOUTHEAST ASIA and OCEANIA (6 languages): Rawang (Sino-Tibetan; Myanmar) (Lapolla 2000), Bantik (Malayo-Polynesian; Indonesia) (Utsumi 2012), Kambara (Malayo-Polynesian; Indonesia) (Klamer 1994; 1998)⁹, Taba (Malayo-Polynesian; Indonesia) (Bowden 1997; 2001), Tukang Besi (Malayo-Polynesian; Indonesia) (Donohue 1999b; 2001), Javanese (Malayo-Polynesian; Indonesia) (Sofwan 2010; Nurhayani 2012; Hemmings 2013)

⁹ I owe the information of Klamer (1994) to Marian Klamer.

AUSTRALIA-NEW GUINEA (7 languages): Warembori (Lower Mamberamo; Indonesia) (Donohue 1999a), Barupu (Skou; Papua New Guinea) (Donohue 2003), Motuna (Bougainville; Papua New Guinea) (Ōnishi 2000), Kope (Kiwaian; Papua New Guinea) (Clifton 1995; Schulz & Petterson 2022)¹⁰, Ngan’gityemerri (Southern Daly; Australia) (Reid 1990), Warrongo (Pama-Nyungan; Australia) (Tsunoda 1998), Kalkatungu (Pama-Nyungan; Australia) (Blake 1979)

EURASIA (6 languages): Ainu (isolate; Japan) (Kindaichi & Chiri 1936; Kindaichi 1991 [1931]), Kolyma Yukaghir (Yukaghir; East Siberia) (Maslova 1999; Nagasaki 2003), rGyalrong (Sino-Tibetan; Sichuan) (Nagano 2018; 2021), Thulung Rai (Sino-Tibetan; Nepal/India) (Lahaussois 2002), Chechen-Ingush (Northeast Caucasian; North Caucasus) (Nichols 1984; 2011), Georgian (Kartvelian; Georgia) (Creissels 2006; Kojima 2012)

1.4 Phenomena to be taken into account in the study

The present study is not supposed to be a comprehensive study of the diachrony of applicatives taking into account all of the aspects or parameters of applicatives; it takes special focuses on exploring the diachrony of some selected aspects. Specifically, the present study will discuss the following topics:

1.4.1 In what way the differences in number of applicative markers arise

Different languages with applicatives have different systems (“families”, in Peterson (2007: 39)’s term) of applicative markers. More specifically, different languages have different numbers of applicative markers, and, different applicative markers, in turn, have different numbers of semantic roles that can be assigned to applied arguments. How this can vary from language to language was pointed out by Kiyosawa & Gerds (2010) and Dixon (2012: 312-318). As an example from my sample languages, Wolof, apart from the suffix *-e*, has another applicative suffix *-al*. These are the only applicative markers Wolof has, and both have wide ranges of meanings (Dione 2013). A contrastive case is Dakota, which has five applicative markers (*ki-* (~ *kic’i-*), *a-*, *e-*, *o-*, and *i-*) each of which only has

¹⁰ I owe the information of Schulz & Petterson (2022) to John M. Clifton.

a small range of meaning (Riggs 2016 [1852]; Adam 2019 [1878]).

It is intended to establish general historical models according to which a language ended up having that number of applicative markers with that number of semantic roles. Taking into consideration the historical relationships among applicative markers in each language, and semantic extension each applicative marker could have undergone, general and consistent diachronic models will be established that capture every theoretically possible pattern of the historical changes that applicative systems can undergo that affect the number of applicative markers and the number of semantic roles of the applicative markers. For example, regarding systems which have two applicative markers (A and B), firstly, A or B or both or none may have undergone semantic extension from its original meaning, and secondly, A and B may either be historically related or not. as a result, eight possibilities, and all of these will be covered by the models. Every language in the sample will be examined in terms of the number of applicative markers it has, the number of semantic roles each applicative marker has, and historical relatedness among the applicative markers. Thus, the sample languages will thereby be classified into corresponding category opened in the theoretical diachronic models.

1.4.2 The origins of different types of applicative markers

Despite its relative ease with which to approach, the parameter of applicative marker types has never been focused on by any researcher in typological perspective, in either synchronic or diachronic level. By “applicative marker types”, I mean the positions of applicative markers with regards to the verbal bases, distinguishing applicative prefixes, suffixes, and more. As mentioned, the Wolof applicative markers are all suffixes, and there are many other languages that have applicative suffixes. Cases of applicative prefixes include Dakota (Riggs 2016 [1852]; Adam 2019 [1878]) and Katukina-Kanamari (Queixalós 2010; 2014). As rare cases, Maricopa (Gordon 1986) and Mosestén (Sakel 2004) have both prefixes and suffixes for applicativization, and Tandroy has an applicative circumfix (Nishimoto 2018).

The problem that will be addressed is how differences in applicative marker types are determined by differences in their diachronic sources and how that can be explained based on the sample languages. For example, it is considered that the prefixal status of

the Rama applicative affix *ka-* in (11c) may be attributed to the fact that its diachronic source is the postposition *ka(ng)* ((11a) and (11b)) (Craig & Hale 1988; Craig 1990), in which case it can be assumed that the postposition *ka(ng)* historically became attached to its following verbs to be a prefix with its form and meaning substantially retained.

(11) Rama (Chibchan; Nicaragua)

- a. *na-ngalbi-u naing taata kang*
 1-run-TNS my father PSP/from

‘I ran away from my father.’

(Craig 1990: 127)

- b. *naing taata ka na-ngalbi-u*
 my father PSP/from 1-run-TNS

‘I ran away from my father.’

(Craig 1990: 127)

- c. *ka-na-ngalbi-u*

RP/from-1-run-TNS

‘I ran away from him.’

(Craig 1990: 127,132)

Thus, it will be investigated whether there is any correlate between a certain type of applicative markers and a certain kind of diachronic sources of applicative markers.

1.4.3 Optional applicatives

Optional applicative constructions (Peterson 2007) refer to applicative constructions that can be paraphrased with the basic meaning retained by non-applicative means, and corresponding applicative markers are called optional applicative markers. For example, in each of the Wolof and Winnebago examples (2) and (3) in 1.1, the (a)-counterpart is a non-applicative paraphrase of the applicative (b)-counterpart. Other examples of optional applicatives include Kolyma Yukaghir, in which the lative role is expressed with a postpositional strategy (12a) and with an applicative strategy (12b):

(12) Herero (Niger-Congo; Namibia/Botswana)¹¹

- a. *ami mé-isan-a omuténa kwándje koviungura*
I PROG/1SG.S.M-call-F 1.elder_brother my 17.LOC/8.work
'I call my brother for the work.'

(Yoneda 2009: 17)

- b. *ami mé-isan-en-e omuténa kwándje oviungura*
I PROG/1SG.S.M-call-AP-F 1.elder_brother my 8.work
'I call my brother for the work.'

(Yoneda 2009: 17)

As will be introduced in 1.4.4 below, not every applicative construction is optional. Due to that, what determines whether an applicative marker ends up as an optional applicative marker or not is an issue of interest, but it has never been explored in diachronic terms previously despite the fact that, as will be suggested in Chapter 2, optionality of applicativization is an important problem of applicatives. Moreover, the way in which promotion is realized in optional applicativization has never been studied in diachronic terms. Thus, regarding optional applicatives, the following two issues will be addressed.

1.4.3.1 How the optionality arises

Optionality of applicative construction is guaranteed by the existence of a semantically compatible adposition or case-marker in that language. For example, in the Kolyma Yukaghir example above, if no adpositions or case-markers in this language could not express a meaning equivalent with that expressed by the applicative suffix *-ri*, the *-ri* applicative constructions would not be optional. This means that considering historical rise and fall of such adposition or case-marker gives clues about the diachronic background of optional applicative constructions. Whether an applicative marker has a semantically compatible adposition/case-marker or had one formerly is related with which kinds of diachronic source the applicative marker comes from, because, for example, if it comes from an adposition, it is possible that the adposition still remains with its semantics still compatible with that of the applicative marker, thus realizing the

¹¹ Digits in glosses denote noun classes unless they have different meanings (like person categories).

optionality of the applicative construction, with the Rwanda example (13) a quite plausible case, showing an optional applicative marker (13b) replaceable with not only semantically but also formally rather similar preposition (13a):

(13) Rwanda (Niger-Congo; Rwanda/DRC)

- a. *úmwáana y-a-taa-ye ámáazi mo igitabo*
 child he-PST-throw-ASP water in book
 ‘The child has thrown the book into the water.’

(Kimenyi 1980: 89)

- b. *úmwáana y-a-taa-yé-mo ámáazi igitabo*
 child he-PST-throw-ASP-in water book
 ‘The child has thrown the book into the water.’

(Kimenyi 1980: 89)

It is possible to consider that such an optional applicative marker originating in an adposition or case-marker was already an optional applicative marker when it came into being, which might not be the case for an applicative marker coming from a different kind of diachronic source, like verb. Thus, based on the distinction of whether the applicative marker would have been optional or obligatory when it was born, theoretically possible patterns of diachronic development of optionality of applicative constructions will be discussed.

1.4.3.2 How obligatoriness/optionality/impossibility of promotion arise

The second issue is relevant with applicativization in which the applied argument does not undergo promotion. As will be discussed in detail in Chapter 2, such constructions are called “oblique applicatives” (Margetts & Austin 2007) or “nondirect applicatives” (Beck 2009), and in terms of the present study’s definition of applicatives that will be elaborated in Chapter 2, these are considered types of applicatives in that semantic-valency-increasing is applicable in any way. In the Taba example (14) below, the applied arguments are in the statuses of non-core arguments, not undergoing promotion:

(14) Taba (Malayo-Polynesian; Indonesia)

- a. *Ahmad npun kolay ada peda*
Ahmad n=pun kolay ada peda
 Ahmad 3SG=kill snake with machete
 ‘Ahmed killed a snake with a machete.’

(Bowden 1997: 235)

- b. *Ahmad npunak kolai ada peda*
Ahmad n=pun-ak kolai ada peda
 Ahmad 3SG=kill-APPL snake with machete
 ‘Ahmad killed a snake with a machete.’

(Bowden 1997: 236)

The phenomenon of nondirect applicativization itself has received some attentions in literature, and certain pieces of explanation have been attempted. However, all of them are synchronic explanations, not involving a diachronic idea. The present study will approach the phenomenon from diachronic point of view with the following methods.

It will be focused on whether or not the applicative marker has a clear historical relationship with the case-marker or adposition which can be used to encode the same semantic role as the applicative marker. For example, in the following examples of nondirect applicatives in Kambera (15), the applicative marker *-ng* and the postposition *la* do not seem to be historically related, while in the example of nondirect applicatives in Chechen-Ingush (16), the applicative marker *chy-* and the postposition *=chy* are historically related (Nichols 2011).

(15) Kambera (Malayo-Polynesian; Indonesia)

- da-ngandi-ng li mbotu la angu-da patau*
 3PL.N-bring-APPL story heavy LOC friend-3PL.G human
 ‘They-bring to la heavy story}[to their fellow humans}: They bring a
 difficult message to their friends.’

(Klamer 1994: 145)

(16) Chechen-Ingush (Northeast Caucasian; North Caucasus)

- a. *cy=chy chy-dexkar txo*
 there=in in-D.put:PL.WP 1P.EX

‘That’s where they put us up.’

(Nichols 2011: 413)

What will be investigated based on this difference is whether an optional applicative marker and its semantically compatible adposition or case-marker are historically related with each other has something to do with whether promotion in the optional applicativization is obligatory or optional (or impossible).

1.4.4 Obligatory applicatives: in what way obligatoriness arises

Contrastively to optional applicatives, obligatory applicatives (Peterson 2007) refer to applicative constructions which do not have a non-applicative paraphrase in that language. As the nondirect applicatives discussed above, in general, obligatory applicatives are not straightforwardly admitted as applicatives. However, valency-increasing interpretation is possible for obligatory applicativization, and the present study will cover obligatory applicatives by its definition of applicatives, as will be taken up in detail in Chapter 2.

As we saw is the case for optionality too, obligatoriness of applicativization is often determined by whether there is an adposition or case-marker semantically compatible with the applicative marker in that language at all. This means that, if the diachronic source of an applicative marker is something different than adposition or case-marker, and the diachronic source does not produce an adposition or case-marker, the applicative marker will be an only child and is thus an obligatory applicative marker. For example, Barupu applicative markers are all obligatory (2003: 114), and they originate in serial verbs (Donohue 2003). One of them is the suffix *-i*, (17b) illustrating a goal applicative construction with the same predicate verb, not applicativized, as in (17a). Note that the subject person marker *-ni* appearing in (17b) suggests *-i*’s verbal origin (Donohue 2003).

(17) Barupu (Skou; Papua New Guines)¹²

- a. *ya n-a-r-aro*
3SG.M IRR-<3.SG.M>-descend

¹² I could not figure out how to gloss elements which Donohue (2003: 123,124) does not explain directly with regard to these particular examples.

‘He will descend.’

(Donohue 2003: 123)

b. *n-o-r-aro-r-i-ni*

IRR-<3.SG.F>-descend-3.SG-TOWARD-1.SG.F

‘She’s descending toward me.’

(Donohue 2003: 124)

As will be discussed in 2.5 in Chapter 2, some authors discussed obligatoriness of applicative construction in typological literature. However, there is no diachronic typological study that has ever been done about historical aspects of optionality or obligatoriness of applicativization. Although Peterson (2007: 46-51) associates obligatory applicatives with benefactive applicatives and animacy, he makes no historical association of obligatoriness/optionality distinction with any other aspects of applicative constructions.

Applicatives are either optional or obligatory¹³, and obligatoriness of applicatives has a close relationship with optionality of applicatives. Consequently, combining these phenomena renders it possible to understand how all of the different types of optional applicative markers (distinguished based on obligatoriness/optionality/impossibility of promotion) and different types of obligatory applicative markers (distinguished based on certain criteria that will be discussed in Chapter 6) are uniformly connected. Thus, to achieve that ultimately, the present study will be occupied with obligatory applicatives as well as optional applicatives.

Additionally, lexicalized applicative constructions will be discussed in line with obligatoriness of applicative constructions. Lexicalized applicatives are mentioned by some authors working on individual languages and by typologists like Peterson (2007: 169-170), and its meaning is literal: the combination of certain applicative marker and verb which is seen as a whole as an independent lexeme. This happens because, when combined with certain verbs, the applicative marker does not fully retain its original grammatical function, but rather brings some idiosyncratic semantic modification to the verb. For example, in Mosestén, when the verb *dyij-yi* ‘think’ receives the theme

¹³ Note however that this does not apply to “conditionally-obligatory applicative markers” (or “conditionally-optional applicative markers”) that will be discussed in Chapter 6.

applicative marker *-tyi* (~ *-tye*), whose regular usage is illustrated in (18a), the meaning of the resulting verb *dyij-ye* is ‘remember’, as in (18b):

(18) Mosetén (Mosetén-Chon; Bolivia)

- a. *yäe je-k-tye-te atya jiri-ty camisa*
 1SG take-DK-APD-3M.O uncle(M) one-M shirt.E(M)

‘I take a shirt from my uncle.’

(Sakel 2004: 321)

- b. *jike-katyi’ dyij-ye-tya-ki okoko-we tētēi-wē*
 PS-EH think-VY-APD-AN.M.S little.toad-DR frog-DR

‘Then he remembered the toads, the frogs.’

(Sakel 2004: 320)

By definition, every lexicalized applicative was originally a grammatical applicative. Although lexicalized applicatives are different from applicatives as a grammatical phenomenon, they will also be taken into account, because it is inevitable that the two are historically adjacent and lexicalized applicatives have a close relationship with obligatory applicatives.

In that way, diachronic processes specific to the formation of obligatory applicatives (and lexicalized applicatives) will be explored with respect to each kind of diachronic sources of applicative markers (adposition, verb, etc.).

1.4.5 How diachrony can explain possibility/impossibility of multiple applicativization

In some languages with applicatives, it is allowed to use more than one applicative marker on a verbal base simultaneously, a phenomenon called “multiple applicativization”. Below, (19) is a Winnebago example of prefixal multiple applicativization, in which the two applicative prefixes *hu-* and *gi-* occur together, for an inessive argument (‘on my bed’) and a possessive argument (‘my’) respectively:

(19) Winnebago (Siouan; Midwestern United States)

- homink-ra hu-un-ra-gi-mink-shannan. < o-in-...*
 bed-DEF INESSIVE-1OBJ-2SUBJ-DAT-lie-DECL

‘You lay (down) on my bed.’

(Craig & Hale 1988: 331)

(20) is a Kashibo-Kakataibo example of suffixal multiple applicativization, in which the two applicative suffixes *-kin* and *-xun* occur together on a verb for an associative argument (‘with his son’) and a benefactive argument (‘for Wilton’) respectively:

(20) Kashibo-Kakataibo (Panoan; Peru)

<i>‘ën</i>	<i>kana</i>	<i>Wilton</i>	<i>ain</i>	<i>bëchikë</i>
<i>‘ë=n</i>	<i>kana</i>	<i>Wilton</i>	<i>ain</i>	<i>bëchikë</i>
1SG=A	NAR.1SG	Wilton.ABS	3SG.GEN	son.ABS
<i>tëkinxunti</i>	<i>‘ain</i>			
<i>të-kin-xun-ti</i>	<i>‘ain</i>			
work-ASSOC-BEN-NOM	be.1/2P			

‘I will work with his son for Wilton.’

(Zariquiey Biondi 2018: 959)

There is no previous study that associated possibility/impossibility of multiple applicativization and historical backgrounds of the applicative markers realizing that. I tried to propose a historical factor that might be responsible for the fact that multiple applicativization is only possible for certain applicative markers or in certain languages.

1.5 Organization of the study

The organization of this study is like the following.

Chapter 2 elaborates the defining properties of applicative constructions, promotion and valency-increasing, to justify the scope of the present study. Chapter 3 features the parameter of “the numbers of applicative markers of a language” and “the number of semantic roles of an applicative marker”, to model and typologize change patterns of the values of those parameters in particular languages. Chapter 4 shifts to the parameter of “marker type of the applicative marker” and propose a correlate between marker types of applicative markers and word order patterns that can be explained diachronically. After that, under the parameter of “optionality and obligatoriness of applicative constructions”, I distinguish Chapter 5 and Chapter 6. The former is dedicated to a discussion of optional

applicative constructions, and the latter is dedicated to a discussion of obligatory applicative constructions. Chapter 5 is firstly concerned with promotion in optional applicativization. With the idea that promotion in optional applicativization may be optional, obligatory, or impossible, it will discuss optional applicative constructions in terms of the parameter of “obligatoriness and optionality of promotion”. Secondly it is concerned with features of case-marker (or adposition)s that are used for paraphrase of applicative constructions. For each of these, after synchronic description is provided, diachronic models and explanations will be discussed with reference to sources of the applicative markers, where some correlations are hypothesized. In Chapter 6, I will firstly propose a way of classifying obligatory applicative constructions in terms of the natures and degrees of their obligatoriness. It will then discuss a possible developmental model for each type of obligatory applicative constructions with reference to sources of the applicative markers, where correlations between the kinds of sources and the types of obligatory applicative constructions will also be suggested. Based on Chapter 5 and Chapter 6, Chapter 7 aims to integrate the discussion made for optional applicativization and obligatory applicativization in diachronic terms, with the intention of ultimately presenting a coherent model that represents the diachronic cycle of optionality and obligatoriness of applicativization. Chapter 8 focuses on the parameter of “multiple applicativization”, and proposes a correlation between the kinds of sources of applicative markers and multiple applicativization, with reference to some finding made about obligatory applicativization in Chapter 6. Chapter 9 summarizes the findings and hypotheses made and their relationships and offers concluding remarks.

2. Defining properties and basic properties of applicative constructions

According to Peterson (2007: 2), the term “applicative” was already used in 1600s by missionaries to describe applicative constructions in Uto-Aztecan languages. The first language for which the term was used seems to be Nahuatl, which was described in Rincón (1595) and Carochi (1892 [1645]). Then, the term “applicative” broke into studies of African languages (especially Bantu languages of Niger-Congo family). Nowadays applicative constructions are described from further areas in the world. Different traditional labels have been used to refer to the grammatical category for certain languages, like: “extension” (e.g., Hyman 2014; Bii et al. 2014), prepositional (e.g., Nurse & Hinnebusch 1993: 370), “objective/locative version” (e.g., Kojima 2012), “objectivization” (e.g., Kimenyi 1980; 1988; Nakamura & Kikusawa 2012), and “dative form” (e.g., Ole Munke 2018: 22). For comparative purposes, however, it is better to capture them in terms of “applicative”, which is the most general term.

Along with the development of linguistic typology, the necessity emerged for defining applicative constructions in cross-linguistic perspective. Nowadays, applicative construction is among the grammatical phenomena to which a consensus cross-linguistic definition is quite difficult. This is because different phenomena in different languages that different authors analyze as applicatives show varying values with regards to several important properties. Generally, primary morphosyntactic functions of applicativization are identified with valency-increasing and promotion. However, what the term “valency-increasing” or “promotion” as concerned with applicativization refers to is not uniformed, and it is necessary to analyze which phenomena may be covered by either of those terms in order to rigorously define applicative constructions in morphosyntactic perspective. This chapter aims to make it clear how the present study defines applicative constructions, and specifically which aspects of applicative constructions it will explore. In particular, this is important also because it is the definition I am going to present which makes applicable some of the parameters introduced in Section 1.3 as parameters of *applicative constructions*.

The organization of the present chapter is as follows, Section 2.1 will briefly review and consider definitions of applicative constructions made in previous studies. Section 2.2 will present the definition the present study employs. Section 2.3 will elaborate elements composing the definition given, that is, valency-increasing and promotion. Section 2.4 will discuss the relationship between applicativization and paraphrase. Section 2.5 will feature the problem of how to treat obligatory applicativization. Section 2.6 will provide a summary.

2.1 Previous definitions of applicative constructions and their problems

Below, I collected different authors' views toward applicativization, aside from Peterson's one already cited in (1) in Chapter 2. However, a caution needs to be reserved regarding the obvious fact that not every author cited here gives his or her statement as a "definition" explicitly; possibly, for some of them, it is a description or characterization rather than a definition which is intended to be given to applicativization as a cross-linguistic phenomenon. Nonetheless, it will be at least possible, by reviewing them, to grasp how applicativization has been interpreted by different authors.

Applicative verbs are a typologically widespread class characterized by valency-increasing morphology which licenses thematically oblique arguments.

(Garrett 1990: 183)

A construction found in certain languages, notably Bantu languages, in which an underlying indirect or oblique object is realized as a surface direct object, the verb usually bearing a distinctive inflection expressing the semantic relation borne by the surface direct object.

(Trask 1993: 18-19)

Applicative: device that promotes an oblique relation to Object (and the name of the resultant construction).

(Palmer 1994: 242)

Some languages have operations whereby a verb is marked for the semantic role of a direct object. Here we will refer to such operations as **applicatives**, though they are also called "advancements" or "promotions" to direct object. In most cases, an applicative can

be insightfully described as a valence increasing operation that brings a peripheral participant onto center stage by making it into a direct object.

(Payne 1997 :186)

Applicatives assign the status of a direct object to oblique roles of different kinds.

(Haspelmath & Müller-Bardey 2004: 1134)

Les formes dérivées du verbe désignée comme applicatives ont comme emploi canonique de permettre l'assignation du rôle syntaxique d'objet à un terme qui ne pourrait pas être construit comme objet si le verbe n'était pas à la forme applicative.

(Derived forms of the verb marked as applicatives have their canonical usage in allowing the assignment of the syntactic role of object to a term which could not be constructed as object if the verb were not in an applicative form.)

(Creissels 2006: 73, my English translation)

The applicative is usually understood as a construction in which a verb bears a specific morpheme which licenses an oblique, or non-core, argument that would not otherwise be considered a part of the verb's argument structure.

(Jeong 2007: 2)

An applicative is a syntactic element adding an extra object to a clause.

(McGinnis 2008: 1225)

an applicative is a morpheme that adds a new actant to the semantic valency of the verb, that actant being expressed as a syntactic object.

(Beck 2009: 537)

applicative markers increase the valency of a predicate by adding a semantic and syntactic argument that can have a number of semantic roles.

(Payne 2010: 164)

Constructions in which a semantically oblique nominal appears as an object, signaled by overt verbal morphology.

(Kiyosawa & Gerds 2010: 329)

Canonical applicative derivation with an intransitive clause.

- (a) Applies to an underlying intransitive clause and forms a derived transitive.
- (b) The argument in underlying S function goes into A function in the applicative.
- (c) An argument which was in peripheral function in the underlying intransitive (the 'applicative argument') is taken into the core, in O function (called the 'AP-O').

(d) The applicative construction receives some explicit marking. This is predominantly by a morphological process of affixation applying to the verb.

(Dixon 2012: 295)

Canonical applicative derivation with a transitive clause.

(a) Applies to an underlying transitive clause—with A and O core arguments—and the derived applicative remains transitive (in some languages, it may be considered to become extended transitive).

(b) The argument in underlying A function stays as is in the applicative.

(c) An argument which was in peripheral function in the underlying transitive (the ‘applicative argument’) is taken into the core, in O function (called the ‘AP-O’), replacing the original O argument.

(d) There are a variety of possibilities for what happens to the O argument of the original non-applicative clause. In Ainu, the original O is simply omitted. Most often, it is moved out of the core and now marked—by an appropriate adposition or case—as a peripheral argument. In some languages, the original O seems to remain as is, so that there appear on the surface to be two objects, the AP-O and the original O. Generally, grammatical tests show that AP-O is the true argument in O function within the applicative construction, with the original O having a more minor role (as ‘second object’). In just a few languages, object properties are shared between AP-O and the original O.

(e) The applicative construction receives some explicit marking. This is predominantly by a morphological process of affixation applying to the verb.

(Dixon 2012: 296)

in an **applicative construction**, the number of object arguments selected by the predicate is increased by one with respect to the basic construction.

(Polinsky 2013)

[...] to increase the valency of the basic verb by promoting adjunct nominals (e.g. beneficiary, instrumental, locative, comitative) to argument status or to P in particular. In order to signal such promotion of an adjunct nominal to P, the verb is typically marked by a so-called applicative affix; the construction as a whole is referred to commonly as the applicative construction.

(Song 2018: 383)

Characteristics of the applicative voice

Its syntactic valency is one more than that of the non-applicative diathesis (e.g., the

predicate is bivalent when its counterpart is monovalent, and trivalent when its counterpart is bivalent).

Its subject corresponds to the subject of the non-applicative diathesis.

Its primary/direct object corresponds to an adjunct or non-core argument in the non-applicative voice, or to a participant that is introduced to the clause as primary/direct object.

Applicativization is formally coded on the predicate complex.

(Zúñiga & Kittilä 2019: 53)

It is possible to extract from many of those definitions and descriptions the more or less underlying idea that “valency-increasing” (specifically, valency-increasing adding a non-agent argument) and “promotion” (specifically, promotion leading to an object status) are the primary properties of applicativization. This applies to the Wolof example cited in 1.1 in Chapter 1 for example:

(21) Wolof (Niger-Congo; Gambia/Senegar)

mungi lek-e kuddu

PRES.3SG eat-APPL Spoon

‘He is eating with a spoon.’

(Comrie 1985: 318)

However, there are controversial cases which the majority of those statements do not mention to determine whether they are applicative constructions or not. The constructions referred to here may be specified through the Ainu example below. While, in (22a), the Ainu applicative prefix *e-* introduces the locative argument carrying no postpositions, in (22b), the locative argument introduced by the same prefix is governed by the postposition *ta*:

(22) Ainu (isolate; Japan)¹⁴

a. *tu-sui re-sui i-setur-kashi e-horipi*

two-times three-times my-back-upside APPL-dance

‘He dances on my back two or three times.’

¹⁴ Throughout the study, I referred to the dictionary of Batchelor (1905) to make English translations and glosses of the Ainu examples when necessary.

(Kannari & Kindaichi 1964: 278)

- b. *kamui ewak-i ta e-an ruwe-ne*
god live-NMLZ at APPL-be DECL-COP
'She found herself in the god's castle.'

(Kannari & Kindaichi 1964: 84)

Lander & Letuchiy (2017) provides analogous instances in West Circassian. In (23a), the person-marking suffix *-p* indicates the 2SG applied argument as an indirect object, and in (23b), the person-marking suffix *-θ* and the case suffix *-m* indicate the 3SG applied argument as an oblique:

(23) West Circassian (Northwest Caucasian; North Caucasus)

- a. *q-[p-fe]-s-sec-st*
DIR-[2SG.IO-BEN]-1SG.ERG-weigh-FUT
'I will weigh it for you.'

(Lander & Letuchiy 2017: 289)

- b. *š'əκ^wə-m c.əfə-m k.^wačə qə-[θ-r]-j-e-tə*
salt-OBL person-OBL strength DIR-3SG.IO-DAT-3SG.ERG-DYN-give
'Salt gives strength to the human.'

(Lander & Letuchiy 2017: 290)

In such constructions, if the affix is seen as an applicative marker at all, the applied argument is a peripheral argument or oblique, rather than a core argument. This means that the semantically peripheral argument remains oblique after applicativization, no promotion occurring. This is against the generally-held idea that the applied argument has to be basically a direct or primary object resulting from promotion. However, as will be discussed later, this construction is cross-linguistically common, and this commonality is at odds with the narrowness of the coverage of the definitions of applicative constructions not allowing such constructions. Many authors do not notice the phenomenon in the first place, but some others do. There are some dedicated labels that the corresponding constructions have been received: Margetts & Austin (2007) and Beck (2009) named them as "oblique applicatives" and "nondirect applicatives" respectively. "Oblique applicative" is characterized by Margetts & Austin (2007) as below in (24), although their discussion is confined to transitive-base applicativization cases:

(24) Oblique applicatives

The verb takes two arguments and an applicative-like marker, which licenses a third participant that is simultaneously marked as an oblique.

(Margetts & Austin 2007)

Thus, Margetts & Austin (2007) notice that applicativization of a NP is accompanied by prepositional marking which is optional or obligatory, and if the oblique marking is realized, one can see an oblique applicative. They cite, together with a Dalabon example, an example of Taba instrumental applicative, in which the oblique marking by the instrumental preposition on the applied argument is optional:

(25) Taba (Austronesian, Indonesia)

yak k=goras-ak kapaya (ada) kobit
1SG 1SG=shave-APPL papaya (with) knife

‘I took the seeds out of the papaya with a knife.’

(Bowden 2001: 208, cited in Margetts & Austin 2007: 16)

They also cite examples in which oblique marking of the applied argument is obligatory, namely examples in which promotion never occurs, from West Greenlandic and Teop. Beck (2009), who calls the corresponding phenomenon “nondirect applicative”, illustrates it with a Temne instrumental applicative whose applied argument is an oblique.

However, both Margetts & Austin (2007) and Beck (2009) rigidly distinguish this phenomenon from prototypical applicative constructions. Although Margetts & Austin (2007) conceived optional and obligatory marking of the applied argument, they refer to the verbal marker in question as “applicative-like marker”, rather than “applicative marker”. Although Beck (2009) attributes the fundamental function of applicativization to the increase of semantic-valency, his definition, like the other definitions, sets syntactic-valency-increasing as a necessary condition for applicativization, semantic-valency-increasing alone being not regarded as a manifestation of applicativization.

Previous studies which notice the phenomenon in typological perspective but do not seem to attribute them the full applicative status include Haspelmath & Müller-Bardey (2004), Creissels (2006), Peterson (2007), and Nakamura (2012). When discussing applicatives and other valency changing operations, Haspelmath & Müller-Bardey (2004:

1136) refer to the constructions in question as “dative-adding applicative”, as an adjacent category to “applicative”, the latter they define as cited above. In their German example (26), the applied argument *ihr* ‘her’ is in dative case.

(26) German (Germanic; Germany)

es ihr in den Wagen werfen
 it her.DAT into the car throw
 ‘throw it in her car’

(Haspelmath & Müller-Bardey 2004: 1136)

Creissels (2006) describes them as “non-canonical” applicatives, mentioning the Georgian case: in (27a) and (27b), the applied argument (‘the envelope’) of the applicative prefix receives supraessive and dative case markings respectively, rather than a core case marking:

(27) Georgian (Kartvelian; Georgia)

a. *k'onvert'-ze misamart-s ac'ers*
 envelope-SUPPRESS address-DAT write.APPL.PRES.S3S.O3.D3
 ‘He is writing the address on the envelope.’

(Creissels 2006: 74)

b. *k'onvert'-s misamart-s ac'ers*
 envelope-DAT address-DAT write.APPL.PRES.S3S.O3.D3
 ‘He is writing the address on the envelope.’

(Creissels 2006: 74)

Peterson (2007: 50) wonders whether such a type of applicative construction is actually an *applicative construction*, citing the following Haya example (28), in which the applicative marking in the verb is not accompanied by a change of the case marking in the NP. However, it should be noted that, as Peterson (2007: 50) notices, these two sentences have a remarkable semantic difference, suggesting that this case is not merely a problem of the occurrence and nonoccurrence of promotion:

(28) Haya (Niger-Congo; Tanzania)

a. *n-ka-gw'* *ómú-nju*

1-TENSE-fall in-house

‘I fell into the house.’

(Hyman & Duranti 1982: 234, cited in Peterson 2007: 49)

b. *n-ka-we-el'* *ómú-nju*

1-TENSE-fall-APP in-house

‘I fell in the house.’

(Hyman & Duranti 1982: 234, cited in Peterson 2007: 49)

Nakamura (2012: 25-26) also pointed out the phenomenon whereby promotion may or may not happen with an identical applicative marker as a cross-linguistic phenomenon. He cites an Amharic example from Amberber (2000). Besides, he discusses a Tswana case with reference to Creissels (2004: 15) (pp. 29-30), briefly mentions Taba based on Bowden (2001) (p. 49), and briefly mentions Swahili based on Marten (2003) (p. 50). The Amharic sentences Nakamura (2012: 25) cites are shown below in (29). However, as will be mentioned in 2.3.1.1.1, the Amharic applicative construction in question lacking case-marking promotion ((29c) below) does *not* lack person-marking promotion, so it is not an instance completely lacking coding promotion, a fact Nakamura (2012) does not note. Also, he does not discuss the Taba and Swahili cases in detail.

(29) Amharic (Afro-Asiatic; Ethiopia)

a. *Aster bə-mət'regiya-w dajj t'ərrəgə-čč*

Aster with-broom-DEF doorway sweep+PERF-3F

‘Aster swept a doorway with the broom.’

(Amberber 2000: 321, cited in Nakamura 2012: 25)

b. *Aster mət'regiya-w-in dajj t'ərrəgə-čč-ibb-ət*

Aster broom-DEF-ACC Doorway sweep+PERF-3F-APPL-3M.O

‘Aster swept a doorway with the broom (lit. Aster, the broom, she swept a doorway with it).’

(Amberber 2000: 321, cited in Nakamura 2012: 25)

c. *Aster bə-mət'regiya-w dajj t'ərrəgə-čč-ibb-ət*

Aster with-broom-DEF doorway sweep+PERF-3F-APPL-3M.O

‘Aster swept a doorway with the broom.’

(Amberber 2000: 321, cited in Nakamura 2012: 25)

Nakamura (2012: 26) characterizes such cases of applicativization by saying that they “involve a departure” from those of applicativization with promotion.

Zúñiga & Kittilä (2019: 57) mention that “the applied object may not be a primary or direct object but have a less prominent grammatical relation instead”. Zúñiga & Kittilä (2019: 57-59) cite examples from languages like Dulong and Lushootseed and mention the terminologies of Margetts & Austin (2007) and Beck (2009).

A notable point is that, even though they consider that “oblique applicatives” or “nondirect applicatives” are deviant from prototypical applicatives, Margetts & Austin (2007), Beck (2009), and Zúñiga & Kittilä (2019) use the term “applied object” to refer to a NP which did not undergo promotion despite the presence of an applicative or applicative-like marker. This suggests that they consider corresponding constructions still applicatives. However, none of them explicitly integrates those cases into their definitions of applicatives, which were cited above.

2.2 Toward a rigorous definition of applicative constructions in terms of promotion and valency-increasing

In agreement with the stance of the different authors not excluding “oblique applicatives” or “nondirect applicatives” from the range of applicatives, a definition may be given by which “nondirect applicative” or “oblique applicative” is treated more equally with “direct applicative” or prototypical applicative than previously. Thus, this approach is distinguished from the ones treating them as a separate phenomenon from prototypical applicatives. Therefore, I propose the following definition:

(30) Definition of applicativization

-A syntactically peripheral argument undergoes obligatory promotion leading to a core status, optional promotion leading to a core status, or no promotion.

and accordingly,

-the predicate verb of the semantically peripheral argument undergoes syntactic-valency-increasing or semantic-valency-increasing with regards to that argument

and

-they are marked by a verbal overt morphological form

It can be seen that conditions employed in this definition include three ways in which promotion is attested and two ways in which valency-increasing is attested. In Section 2.3 below, these will be discussed in turn. Such distinctions of the ways of promotion and valency-increasing in applicativization are generally lacking in the previous definitions, according to which syntactic-valency-increasing and promotion should be obligatory in applicativization, meaning that the applied argument has to be a core argument.

2.3 Ways in which promotion and valency-increasing are manifested in applicativization

The present study's definition is not different from many previous ones in setting the basic parameters "valency-increasing" (specifically, valency-increasing adding a non-agent argument to a predicate) and "promotion" (specifically, promotion leading to a core status) as absolute principles for defining applicative constructions. However, the difference is that the present study takes the maximal interpretation possible of which phenomena have any property extractable as "valency-increasing adding a non-agent argument" or "promotion leading to an object status". This was done based on the ideas of optionality and obligatoriness of oblique marking (Margetts & Austin 2007) on the one hand and semantic-valency (Beck 2009) on the other in applicativization, and is reflected in the definition given above. Thus, as indicated in the definition, I distinguish obligatory promotion, optional promotion, and no promotion, as patterns of promotion, and semantic-valency-increasing and syntactic-valency-increasing, as types of valency-increasing in applicativization. It is obvious that syntactic-valency-increasing and promotion denote an overlapping phenomenon, but it is from different perspectives: the perspective of the verb and the perspective of the argument, respectively. This section will separate the two phenomena so as to discuss the properties of applicativization from the two perspectives one by one, the two defining properties of applicativization.

2.3.1 Promotion

Let us begin with promotion. In the literature on applicatives, promotion is often

mentioned together with “valency-increasing”, as seen in some of the definitions cited above. First, it is necessary to discuss in what way promotion is realized when it is realized at all, namely, types of promotion. After that, obligatory promotion, optional promotion, and cases in which promotion is impossible will be discussed.

2.3.1.1 Types of promotion

Promotion (or “advancement”, in the Relational Grammar approach) in applicativization refers to the phenomenon whereby morphosyntactic primacy of a thematically peripheral argument is upgraded to become a core (e.g., Palmer 1994: 161-171; Payne 1997: 186-191; Song 2018: 383-391). Promotion in applicativization can be divided into coding promotion and behavior promotion, similarly to Bresnan & Moshi (1990)’s distinction between coding properties and behavioral properties with regard to object status which Nakamura (2012: 34-35) discusses (cf. Nam 2018: 21-25). These will be introduced in turn, after which promotion resulting in an applied argument with subjective marking instead of objective marking will be discussed.

2.3.1.1.1 Coding promotion: flagging promotion, person-marking promotion, and constituent order promotion

Depending on by which strategy the core status is coded, three types of promotion can be distinguished: flagging promotion, person-marking promotion, and constituent order promotion. Below, these will be discussed in turn.

The most major type of promotion is promotion manifested in the use of case-markers or adpositions with regard to the argument in question. As Haspelmath (2019: 97) notes, which label to use, case-markers or adpositions, to describe certain elements is not based on a common universal ground, so that the covering term “flagging” by Haspelmath (for example, in Haspelmath 2005; 2013; 2019) will be used here to group together case-marking and adposition strategies. In the Wolof example (2) in 1.1 in Chapter 1, promotion may be observed in the sense that the (2b), which is morphosyntactically more primary than an adjunct, owing to the applicativization of the verb. The following is a similar example from Javanese. The NP *bapak-e* ‘his father’, which is syntactically non-core due to the benefactive preposition *kanggo* in (31a), is promoted to a core in (31b) through applicativization by the applicative suffix *-ake*:

(31) Javanese (Malayo-Polynesian; Java)

- a. *Ali ndonga kanggo bapak-e*
Ali pray for father-3SG.POSS
'Ali prayed for his father.'

(Sofwan 2010: 10)

- b. *Ali ndongak-ake bapak-e*
Ali pray-APPL father-3SG.POSS
'Ali prayed for his father.'

(Sofwan 2010: 10)

Case-marking promotion in applicativization is quite general and many other languages in my sample have it.

Person-marking promotion denotes the phenomena whereby an argument with a certain semantic role which is normally not coded by person-marking, after applicativization, gets be able to be coded by person-making in the same way as ordinary objects are in that language. This is observed in some of the languages which have applicative constructions and person-marking systems. Amharic instantiates this type of promotion. Nakamura (2012: 26) states that Amharic applicativization shown in (32b) below is at odds with the definition of applicativization as a valency-increasing operation, based on the fact that the case-marking of the applied argument (by *bə-*) is the same as when the verb is not applicativized, as shown in (32a). However, it is not that the applied argument has undergone no promotion at all: the suffix *-ət* in (32b), which Nakamura (2012) does not mention, is a person marker for the instrumental applied argument, and it does not appear without an applicative marker (*-bb* or *-ll*), at least in Amberber (1997; 2000). Thus, the occurrence of the person marker may be seen as a type of promotion: person-marking promotion.

(32) Amharic (Afro-Asiatic; Ethiopia)

- a. *Aster bə-mət'regiya-w dajj t'ərrəgə-čč*
Aster with-broom-DEF Doorway sweep+ PERF-3F
'Aster swept a doorway with the broom.'

(Amberber 2000: 321, cited in Nakamura 2012: 25)

- b. Aster *bə-mət'regiya-w dajj t'arrəgə-čč-ibb-ət*
 Aster with-broom-DEF Doorway sweep+PERF-3F-APPLIC-3M.O
 'Aster swept a doorway with the broom.'

(Amberber 2000: 321, cited in Nakamura 2012: 25)

Person-marking promotion, such as that shown in (32b) which only can appear with an applicative marker, may be understood as an applicative property to the extent that case-marking promotion is an applicative property, if we take what Haspelmath (2013: 212) calls “the double-expression view”; according to the view, a person marker is not an agreement marker or a pronoun, but it itself equals to an argument when it co-occurs with a free NP that expresses the same argument (Haspelmath 2013: 212). Another example is from Ainu. In each of the two clauses involved in (33), a 1SG recipient argument, which cannot be indexed by person-marking on the verb without an applicative marker, are indexed by person-marking on the verb owing to the applicative prefix *ko-*. This instantiates person-marking promotion.

(33) Ainu (isolate; Japan)

- tuki i-ko-tarara a-uina chiki i-ko-i-yomare*
 glass me-APPL-hold.out 1SG-take when me-APPL-ANTIP-pour
 'She hands over a glass to me. I receive it and she pours alcohol for me.'

(Kannari & Kindaichi 1964: 221)

In Rawang applicative constructions, which can be analyzed as nondirect applicatives (Zúñiga & Kittilä 2019: 58), coreferential case-marker (or adposition) always appears if the applied argument is not coded by zero anaphora, and it seems that case-marking promotion never happens. Despite that, promotion is observable in that the verb receives a transitivization marker when applicativized, which at the same time indexes the applied argument. This can be seen as person-marking promotion. In the following example, while the benefactive NP in (34a) does not receive person-marking, the one in (34b) does, by virtue of the benefactive applicative suffix *-ā*:

(34) Rawang (Sino-Tibetan; Myanmar)

- a. *yākōng ýmpà nō vshòmǵó dvpvt luqē*

yā-kōng vmpà nō vshòm-gó dypvt luq-ē
 this-CL rice top three-CL for be.enough-NPST
 ‘This bowl of rice is enough for three people.’

(Lapolla 2000: 304)

b. *ngài àng-svng/dypvt shóng róngāngòē*
ngà-í àng-svng/dypvt shóng rí-ng-ā-ng-ò-ē
 1SG-AGT 3SG-LOC/for wood carry-1SG-BEN-1SG-3+TR.NPST-NPST
 ‘I’m carrying wood for him.’

(Lapolla 2000: 305)

Employing a special or marked constituent order may participate in coding promotion in applicativization. Such a constituent order promotion seems to typically be combined with another type of coding promotion, particularly with case-marking. In *Tukang Besi*, according to Donohue (2001: 221), ditransitive-based applicativization causes the following change in constituent order together with the change in case-marking. For example, (35a) and (35b) are different from each other with regards to the order of the theme and benefactive NPs, due to the absence and presence of the applicative suffix:

(35) *Tukang Besi* (Malayo-Polynesian; Indonesia)

a. *no-balu te bambai ako te porai-no*
 3R.S-buy CORE comb BEN CORE fiancée-3GEN
 ‘He bought a comb for his fiancée.’

(Donohue 2001: 221)

b. *no-balu-ako te porai-no te bambai*
 3R.S-buy=APPL CORE fiancée-3.GEN CORE comb
 ‘He bought a comb for his fiancée.’

(Donohue 2001: 221)

In *Warembori* intransitive-based applicativization by the applicative suffix *-na*, either case-marking promotion or constituent order promotion takes place, as in (36b) and (36c) respectively:

(36) *Warembori* (Lower Mamberamo; Papua)

- a. *iwi on-do nana karapesa*
 1SG sit-IND OBL chair
 ‘I sat on a chair.’

(Donohue 1999a: 36)

- b. *iwi o(n)-na karapesa*
 1SG sit-APPL chair
 ‘I sat on the chair.’

(Donohue 1999a: 36)

- c. *nana karapesa iwi o(n)-na*
 OBL chair 1SG sit-APPL
 ‘I sat on a chair.’

(Donohue 1999a: 36)

- d. **nana karapesa iwi on-do*
 OBL chair 1SG sit-IND
 ‘I sat on a chair.’

(Donohue 1999a: 36)

Katukina-Kanamari applicativization also shows changes in constituent order, too:

(37) Katukina-Kanamari (Harákmbut-Katukinan; Amazonia)

- a. *hoki kariwa Poroya na=katu*
 talk non.Indian Poroya CASE=SOC.INST
 ‘The non-Indian is talking to Poroya.’

(Queixalós 2010: 41)

- b. *kariwa na=katu-hoki Poroya*
 non.Indian CASE=APPL-talk Poroya
 ‘The non-Indian is talking to Poroya.’

(Queixalós 2010: 42)

2.3.1.1.2 Behavior promotion

It is known that promotion in applicativization not only refers to the state whereby the argument becomes coded like a core argument, but also to the state whereby the argument becomes able to grammatically behave as if it is a core argument in syntactic terms (e.g., it gets access to relativization, passivization, topicalization,

interrogativization, etc.) (e.g., Givón 1979: 159-206; Bresnan & Moshi 1990). Thus, behavior promotion is distinguished from coding promotion as discussed above in 2.3.1.1.1. In Nadëb, for example, relativization of a locative noun phrase is enabled by applicativization:

(38) Nadëb (Nadahup; Amazonia)

eé *ba-g#'* *doo*
 father ABL-be_in_hammock the_one
 'the one in which my father is'

(Weir 1986: 304, cited in Peterson 2007: 154)

For other cases, see Givón (1979: 159-206) for example, who discusses Rwanda and Swahili cases.

I tentatively assume that behavior promotion presupposes coding promotion. If an applicative marker only causes behavior promotion, it will mean that the applicative marker has been reinterpreted as a grammatical marker corresponding with that syntactic behavior (i.e., relativizer, passivizer, etc). This happened in Eastern Mayan languages for example, in which an instrumental applicative marker yielded an extraction marker through functional change (Norman 1978)¹⁵ (see Peterson (2007) for other cases). In any case, the present study focuses on coding promotion and will not take into account behavior promotion.

2.3.1.1.3 Promotion to object vs. promotion to subject

Promotion in applicativization is a promotion of a syntactically peripheral argument, which is in many cases semantically peripheral as well, to the status of core, namely, subject or direct object. Although, as has seen so far, the resulting status is direct object in the majority of cases, it can be subject as well, according to my definition of applicatives. Zúñiga (2020a; 2020b) calls such cases “subjective applicativization”, with examples including (39), in which the applied argument of the applicative morpheme -*ñma* is a 1SG argument in a subject function:

¹⁵ I owe the information of Norman (1978) to Lyle Campbell.

(39) Mapudungun (Araucanian; Chile/Argentina)

mawüin-ma-n

rain-ÑMA-1SG.IND

‘I got rained on.’ (lit., ‘I rained-for/on’)

(Salas 2006: 125, cited in Zúñiga 2020a: 1)

In my language sample, Bantik seems to have subjective applicativization: in (40), *tikin* ‘stick’ is the applied argument of the applied prefix *pa-*, is placed in the subject position, and functions as a subject.

(40) Bantik (Malayo-Polynesian; Indonesia)

tikin pa-nuri ni-Heis su-kapuna ene

stick PAN-touch NI-Heis SU-dog that

‘The stick is used by Heis to touch that dog.’

(Utsumi 2012: 118)

The other language in my sample that shows a subjective applicative property is *Tukang Besi*, as in (41) (see also Donohue (2001: 219), in which the applied argument *ina-no* ‘her mother’ is marked by nominative case:

(41) *Tukang Besi* (Malayo-Polynesian; Indonesia)

no-wila-ako-‘e na ina-no i daoa

3R-go-APPL-3OBJ NOM mother-3POSS OBL market

‘She went to the market for her mother.’

(Donohue 1999b: 232)

Note that both cases are cases of flagging promotion.

2.3.1.2 Obligatoriness and optionality of promotion

Promotion not always occurs in applicativization. The expression “allow the coding of...” in Peterson (2007: 1)’s definition of applicative constructions cited in (1) in 1.1, repeated below, implies that applicativization does *not* obligate the argument to be expressed as a core argument, but merely allows it leaving the possibility of it not being realized.

(42) Applicative constructions

a means some languages have for structuring clauses which allow the coding of a thematically peripheral argument or adjunct as a core-object argument. Such constructions are signalled by overt verbal morphology.

(Peterson 2007: 1)

However, considering that Peterson (2007: 50) expresses uncertainty regarding whether lack of coding promotion still can be claimed to be applicativization, it is also possible that he did not take into account applicativization without coding promotion in his definition using the expression “allow”.

In harmony with Peterson (2007)’s implication, which may be intentional or unintentional, it is possible to make an analogous interpretation to the one made in Margetts & Austin (2007) that oblique marking of the applied argument may be optional or obligatory. This is taking a view that the expression of coding promotion by an applicative marker is not always obligatory, and for some applicative markers, it is optional (that is, the present study regards that it is promotion, rather than oblique marking of the applied argument, which may be optional or obligatory). In addition to this distinction, I also pay attention to applicative markers which do not have options of promotion at all, which Margetts & Austin (2007: 21) discusses in terms of the obligatoriness of oblique marking of the applied argument. Thus, theoretically, three types of applicativization can be distinguished in terms of applicative markers: applicativization with optional coding promotion, applicativization with obligatory coding promotion, and applicativization with no coding promotion option. In what follows, these will be discussed one by one. One would ask how an element which does not cause promotion can be analyzed as an applicative marker. This will be explained with the notion of semantic-valency-increasing in 2.3.2.

2.3.1.2.1 Obligatory promotion

Promotion in applicativization was more often than not regarded as a prerequisite for applicativization to be (or prototypical) applicativization. In fact, however, applicativization with obligatory promotion is difficult to identify, because most authors who describe applicativization in particular languages whose promotion appears to be

obligatory promotion do not explicitly state whether the promotion *is really* obligatory. I could not identify a case through literature. However, I elicited information by inquiring authors of the literature referred to. Below, languages in my sample which do not seem to leave ambiguity regarding the obligatoriness of the promotion in their applicativization will be discussed.

Firstly, in *Tukang Besi*, according to Mark Donohue (personal communication, 2021), the applicative markers must cause promotion, and for example, the meaning of ‘he bought a comb for his fiancée’ has to be expressed by either the preposition *ako* or the applicative *-ako* but not by both at the same time:

(43) *Tukang Besi* (Malayo-Polynesian; Indonesia)

- a. *no-balu te bambai ako te porai-no*
 3R.S-buy CORE comb BEN CORE fiancée-3GEN
 ‘He bought a comb for his fiancée.’

(Donohue 2001: 221)

- b. *no-balu-ako te porai-no te bambai*
 3R.S-buy=APPL CORE fiancée-3.GEN CORE comb
 ‘He bought a comb for his fiancée.’

(Donohue 2001: 221)

In Javanese, according to Windy Harsiwi (personal communication, 2021), the same rule applies, for example, to express the meaning of ‘s/he shopped for Anna’, one has to choose between the preposition strategy (44a) and the applicative strategy (44b), using both is inappropriate:

(44) Javanese (Malayo-Polynesian; Java)

- a. *dheweke blanja kanggo Anna*
 3SG shop for Anna
 ‘S/he shopped for Anna.’

(Sofwan 2010: 10)

- b. *dheweke mblanjak-aké Anna*
 3SG TR.shop-APPL Anna

‘S/he shopped for Anna.’

(Sofwan 2010: 10)

According to Tasaku Tsunoda (personal communication, 2021), the Warrongo applicative marker *-riL⁽¹⁾* (the other applicative marker is *-riL⁽²⁾* (Tsunoda 1998)) can take an applied argument in accusative case only¹⁶. Therefore, it is impossible for an oblique marked NP to be introduced by an applicative marker, meaning that all attested cases are like the following:

(45) Warrongo (Pama-Nyungan; Australia)

yarru-Ø=kul kampi-Ø Ngaya nyina-ri-n
this-ACC=only clothes-ACC 1SG.ERG sit-VCOM-NFUT

‘I am sitting with only these clothes on.’, i.e. ‘I have only these clothes on.’

(Tsunoda 1998: 349)

ngaya yarru-Ø muja-ri-lku
1SG.ERG this-ACC eat-VINST-PURP

‘I eat with/from this [plate]’, or ‘This [plate] is for me to eat with/from.’

(Tsunoda 1998: 362)

In a similar vein, according to Iku Nagasaki (personal communication, 2021), no instance is attested in which an applied argument of the Kolyma Yukaghir applicative markers *-ri* and *-re* is marked with a non-core case. Thus, in the following example, the theme relation can be marked by a case-marker as in (46a) or by the applicative suffix *-ri* as in (46b), but cannot be marked by both simultaneously. Note that, person-marking promotion also occurs in addition to case-marking promotion.

(46) Kolyma Yukaghir (Yukaghir; East Siberia)

a. *tudel met-in jɔvon'e-j*
3.SG 1SG-LAT be_cross-INTR.3.SG

‘He is cross at me.’

(Nagasaki 2003: 17)

¹⁶ The digits in the parentheses on the two suffixes are my own to indicate that they are distinct. For their difference, see 3.2.1 in Chapter 3.

- b. *tudel met-kele jɔʋon'e-ri:-m*
 3.SG 1.SG-ACC be_cross-APPL-TR3G
 'He is cross at me.'

(Nagasaki 2003: 17)

Likewise, according to Francesc Queixalós (personal communication, 2021), Katukina-Kanamari applicativization does not allow co-occurrence of a case-marker (or adposition) for an identical argument. Accordingly, in the following example, the addressee relation which is marked by the case-marker *na=katu* in (47a) cannot retain the case-marker in (47b), where an applicative prefix is instead used.

(47) Katukina-Kanamari (Harákmbut-Katukinan; Amazonia)

- a. *hoki kariwa Poroya na=katu*
 talk non.Indian Poroya CASE=SOC.INST
 'The non-Indian is talking to Poroya.'

(Queixalós 2010: 41)

- b. *kariwa na=katu-hoki Poroya*
 non.Indian CASE=APPL-talk Poroya
 'The non-Indian is talking to Poroya.'

(Queixalós 2010: 42)

According to Lyle Campbell (personal communication, 2021), the K'iche' instrumental applicative suffix *-b'e* is not likely to be able to co-occur with a preposition for an identical argument, being obligatory:

(48) K'iche' (Mayan; Guatemala)

- a. *š-at-in-č'ay č'i če:ʔ*
 ASP-2SG.ABS-1SG.ERG-hit with wood
 'I hit you with a stick.'

(Campbell 2000: 278)

- b. *če:ʔ š-ø-in-č'aya-b'e-x a:w-e:h*
 wood ASP-3SG.ABS-1SG.ERG-hit-INSTR-TR 2SG.POSS-GEN
 'I used a stick to hit you.'

(Campbell 2000: 278)

According to Jeffrey Heath (personal communication, 2021), in Koyra Chiini, the applicative suffix *-nda* basically cannot co-occur with its origin the preposition *nda* (see also 5.3.1 in Chapter 5):

(49) Koyra Chiini (Nilo-Saharan; Mali)

yee *hima-nda* *a* *se* *haysi*
 1SG.S.IMPF resemble-APPL 3SG DAT dog
 ‘I resemble a dog for him (=from his point of view)’

(Heath 1999: 137)

According to Doris Payne (personal communication, 2021), in Maasai, it is not possible to retain the preposition *tè* when the verb is applicativized by the suffix *-ié*. This means that, in the following example, the instrumental relation is marked by an oblique marking in (50a), and if it is marked by an applicative suffix like in (50b), the oblique marking cannot occur:

(50) Maasai (Nilo-Saharan; Kenya/Tanzania)

a. *á-i^ηðr* *ɔl-ηátúny* *t-ɔl-tðrɔ̀bìni*
 1SG-look.at M.SG-lion.ACC OBL-M.SG-binoculars.NOM
 ‘I will look at the lion with the binoculars.’

(Lamoureaux 2004: 65)

b. *á-i^ηðr-ié* *ɔl-ηátúny* *ɔl-tðrɔ̀bìni*
 1SG-look.at-APPL M.SG-lion.ACC M.SG-binoculars.NOM
 ‘I will use the binoculars to look at the lion.’

(Lamoureaux 2004: 66)

On the topic of Wolof applicatives, Harris (2015: 129,133) seems to define “hybrid applicatives” as a co-occurrence of the applicative marker *-e* and its preposition counterpart for an identical argument, and she does not report a “hybrid” case for the other Wolof applicative marker *-al*. Thus, it is estimated that the latter does not allow a co-occurrence with a case-marker or adposition for an identical argument, thereby the promotion is obligatory. Below are examples. Note that *fa* glossed with LOC in (51b) seems to be an adverb ‘there’, judging from the translation.

(51) Wolof (Niger-Congo; Gambia/Senegar)

- a. *wax-al naa Boris*
speak-APPL 1SG Boris
'I spoke for/on behalf of Boris.'

(Harris 2015: 123)

- b. *dem-al naa fa Boris*
speak[sic]-APPL 1SG LOC Boris
'I went there for/on behalf of Boris.'

(Harris 2015: 123)

In that way, every language I focused on with applicative markers whose instance with no promotion is mentioned in the literature turned out to have applicative markers whose promotion is obligatory. Finally, Chechen-Ingush case requires a special remark. Promotion in Chechen-Ingush applicativization is apparently optional. In 2.2, it was discussed that Chechen-Ingush applicatives are nondirect applicatives, having applied arguments with non-core case-marking promoted from even more peripheral case-marking. In fact, the latter case-marking can be retained even when the verb is applicativized. In (52a) and (52b), respectively, the applicative markers did not promote the NPs, so that the postpositions remain:

(52) Chechen-Ingush (Northeast Caucasian; North Caucasus)

- a. *cy=chy chy-dexkar txo*
there=in in-D.put:PL.WP 1P.EX
'That's where they put us up.'

(Nichols 2011: 413)

- b. *cysjk istuolaa=t'y wa=t'y-qossa-dalar*
cat table.dat=on down=on-jump-D.INCP.WP
'The cat jumped (down) onto the table (from someplace above).'

(Nichols 2011: 414)

However, Nichols (2011: 413) mentions that such cases involve "lexicalization" of the preverbal *chy-* and *t'y-* with the base verbs. This means that (52a) and (52b) are instances of lexical applicativization (this will be introduced in 2.5), not grammatical applicativization, so that they are not relevant with the discussion here, because we are

talking about grammatical optional applicativization. In grammatical applicativization by *chy-* and *t'y-*, the promotion is obligatory (Nichols 1984), as seen in:

(53) Chechen-Ingush (Northeast Caucasian; North Caucasus)

a. *čajna ču šiekar tasan*
 tea-DAT in sugar sprinkle
 ‘Put sugar in tea.’

(Nichols 1984: 193)

b. *šiekar čaj-na ču-tasan*
 sugar-NOM tea-DAT in-sprinkle
 ‘Put sugar in tea.’

(Nichols 1984: 193)

c. *bierana t'e huma ju:xan*
 child-DAT on thing-NOM dress
 ‘Dress a child.’, ‘Get a child dressed.’

(Nichols 1984: 193)

d. *na:nas biera: kuoč t'a-ju:x*
 mother-ERG child-DAT shirt-NOM on-dress
 ‘The mother dresses the child in a shirt.’, ‘The mother puts a shirt on the child.’

(Nichols 1984: 193; Nichols 2011: 486)

Other languages which I recognize have applicative markers with obligatory promotion but which are not among my sample languages include Classical Yucatec and Ixil (Mayan; Guatemala) (Yasugi 2003). For details, see 5.3.2 in Chapter 5.

2.3.1.2.2 Optional promotion

Now let us see optional promotion cases. To be noted, the phenomena themselves whereby case-marking or government by an adposition is invariable before and after applicativization have been reported from some languages even aside from those cited by Margetts & Austin (2007). Below, examples will be discussed.

Let us start from Ainu. As has been known since Kindaichi (1993 [1931]: 264-276), Ainu has three applicative markers all of which are prefixes: *e-*, *ko-*, and *o-*. The following

frequently-cited example of *e-* applicativization involving case-marking promotion is a citation by Shibatani (1990: 35,65; 1992: 207; 1996: 159) from Mashiho Chiri’s work:

(54) Ainu (isolate; Japan)

- a. *poro cise ta horari*
big house at live

‘He lives in a big house.’ (Shibatani (1990; 1996)’s English translation)

(Chiri 1974: 90, cited in Shibatani 1990: 35,65; 1992: 207; 1996: 159)

- b. *poro cise e-horari*
big house APPL-live

‘He lives in a big house.’ (Shibatani (1990; 1996)’s English translation)

(Chiri 1974: 90, cited in Shibatani 1990: 35,65; 1992: 207; 1996: 159)

Shibatani (1992: 207) sees an “alternation” of a postposition and an applicative prefix between (54a) and (54b). Every Ainu applicative example appearing in the previous Ainu studies I acknowledge (e.g., Kindaichi 1993 [1931]; Kindaichi & Chiri 1936; Chiri 1974; Tamura 1988; 2020; Shibatani 1990; 1992; 1996) is without exception of this pattern. In reality, however, at least in poetic language (as appears in the Ainu epic *Yukar*), there seems to be no strict dichotomy between the elements *e-* and *ta* (or other postpositions) whereby they must occur complementarily to code an identical argument. Consider the following examples:

(55) Ainu (isolate; Japan)

- | | | | | | |
|-------------------|------------------|--------------------|--------------------|---------------|------------------------|
| a. <i>samake</i> | <i>ta</i> | <i>noyab-i</i> | <i>tanne</i> | <i>noyap</i> | <i>hontom-o</i> |
| adjacent | at | profile-CSTR | long | profile | half-CSTR |
| <i>pepesh</i> | <i>otop</i> | <i>chikoetuye</i> | <i>karip</i> | <i>pak</i> | <i>ninkari</i> |
| straight | hair | cut | hoop | degree | earring |
| <i>kotchaketa</i> | <i>oshmaketa</i> | <i>chieutomkik</i> | <i>sachipokash</i> | <i>menoko</i> | <i>e-horari</i> |
| before | behind | attach | very_ugly | girl | APPL-sit |

‘An ugly girl is seated by the side, who has a long chin and straight hair cut at the height of the middle of her chin and carries earrings of hoops’ sizes before and behind her ears.’

(Kannari & Kindaichi 1964: 66-67)

- b. *kamui ewak-i ta e-an ruwe-ne*
god live-NMLZ at APPL-be DECL-COP
'She found herself in the god's castle.'

(Kannari & Kindaichi 1964: 84)

- c. *hoka etok ne an-e-horari*
fireplace origin at I-APPL-sit
Kemkakarip harki-sam ne e-horari
Kemkakarip left-side at APPL-sit
'I sat at the head of a fire-place and Kemkakarip sat in the left side.'

(Kannari & Kindaichi 1964: 299)

- d. *kotan-kor sapo shiso-sam ne i-e-a-re*
village-have sister right-side at me-APPL-sit-CAUS
'My sister, the guardian of the village, made me sit in the right side, and...'

(Kannari & Kindaichi 1959: 77-78)

In (55a), the applicative prefix *e-* on the verb *horari* 'be seated' at the end takes *samake* 'adjacent' at the first as its applied argument, the long subject NP intervening between those two elements. Nonetheless, *samake* also carries the locative postposition *ta* 'at'. Thus, the attachment of the applicative *e-* does not cause promotion of *samake* or valency-increasing. This could be attributed to the fact that the distance between the applied argument and the applicativized verb is substantially long, and *e-* could have a reminding function to facilitate successful processing of the sentence. However, in (55b), (55c), and (55d), the applicative prefix *e-* is present notwithstanding the short distance between the verbs with the applicative prefixes and the postpositional phrases which are the applied arguments.

Ko-, another applicative prefix, also can be used either with promotion, as in (56a), or without promotion, as in (56b) and (56c):

(56) Ainu (isolate; Japan)

- a. *abunno ainu kotan e-ko-hosibi kusu*
calmly human village you-APPL-return therefore

‘because you peacefully go back to the human’s village,’

(Kannari & Kindaichi 1964: 137)

- b. *chikupsho-pa ta chikupsho-kash ta hayok numikir ko-kinnatara*
mat-top at mat-end at armor group APPL-sit_well

‘The armor corps are dressed up gorgeously seated on both top and end of the mat.’

(Kannari & Kindaichi 1964: 206)

- c. *rorunburai ne ko-yaitunashka*
first_window to APPL-be.hasty

‘(I) hurried to the first window.’

(Kannari & Kindaichi 1966: 196)

As for the remaining applicative prefix *o-* (whose occurrence per se is rare), so far, I could not find any equivalent instances, the possibility left that it causes obligatory promotion.

Taba, which Nakamura (2012: 49) briefly mentions based on Bowden (2001), has two applicative affixes all of which are suffixes: *-k* and *-o* (Bowden 1997). The following is the case of *-k*, in which coding promotion is realized by case-marking:

(57) Taba (Malayo-Polynesian; Indonesia)

- a. *Oci nliko manik ada sapatu*
Oci n-liko manik ada sapatu
Oci 3SG=tread.on chicken with shoe

‘Oci trod on the chicken with his shoe.’

(Bowden 1997: 378)

- b. *Oci nliko manik pake sapatu*
Oci n-liko manik pake sapatu
Oci 3SG=tread.on chicken INST shoe

‘Oci trod on the chicken with his shoe.’

(Bowden 1997: 378)

- c. *Oci nlikok manik sapatu*
Oci n=liko-k manik sapatu

Oci 3SG=tread.on-APPL chicken shoe

‘Oci trod on the chicken with his shoe.’

(Bowden 1997: 241,378)

However, the following is also possible, in which no coding promotion takes place despite the presence of the applicative marker:

(58) Taba (Malayo-Polynesian; Indonesia)

d. *Oci nlikok manik ada sapatu*

Oci n=liko-k manik ada sapatu

Oci 3SG=tread.on-APPL chicken with shoe

‘Oci trod on the chicken with his shoe.’

(Bowden 1997: 379)

e. *Oci nlikok manik pake sapatu*

Oci n=liko-k manik pake sapatu

Oci 3SG=tread.on-APPL chicken INST shoe

‘Oci trod on the chicken with his shoe.’

(Bowden 1997: 379)

Coding promotion of *-o* is realized by case-marking promotion with a postposition rather than a preposition:

(59) Taba (Malayo-Polynesian; Indonesia)

a. *ntek woya botol li*

n=tek woya botol li

3SG=scoop water bottle LOC

‘He’s scooping out water from the bottle.’

(Bowden 1997: 380)

b. *nteko woya botol*

n=tek-o woya botol

3SG=scoop-APPL water bottle

‘He’s scooping out water from the bottle.’

(Bowden 1997: 380)

However, in the same vein as the case of *-k*, the following is also possible:

(60) Taba (Malayo-Polynesian; Indonesia)

- c. *nteko* *woya* *botol* *li*
 n=tek-o *woya* *botol* *li*
 3SG=scoop-APPL water bottle LOC
 ‘He’s scooping out water from the bottle.’

(Bowden 1997: 245,380)

According to Marten (2003), there are instances in which promotion does not occur in Swahili applicativization. In the following example, the locative case-marker appearing in (61a) is not removed when an applicative marker is used to mark the locative relation as in (61b), bringing some aspectual difference.

(61) Swahili (Niger-Congo; East Africa)

- a. *mpishi* *a-li-pik-a* *jiko-ni*
 cook S-PST-cook-FV kitchen-LOC
 ‘The cook was cooking in the kitchen.’

(Marten 2003: 10)

- b. *mpishi* *a-li-pik-i-a* *jiko-ni*
 cook S-PST-cook-APPL-FV kitchen-LOC
 ‘The cook was cooking in the kitchen (habitually).’

(Marten 2003: 10)

Yoneda (2009) provides the following examples for Herero applicativization by the suffix *-er* (~ *-en*, *-ir*, *-in*). It can be seen that, while the applied argument has been promoted in (62a), it remains marked by the locative case in (62b).

(62) Herero (Niger-Congo; Namibia/Botswana)

- a. *ovandu* *má-ve-pund-ir-u* *omukandí*
 2.people PROG-2.SM-dance-APPL-F 3.wedding
 ‘People are dancing for the wedding ceremony.’

(Yoneda 2009: 8)

- b. *ami* *mé-isan-en-e* *ovanéné* *komukandí*

I PROG/1SG.SM-call-APPL-F 2.parents 17.LOC/3.wedding

‘I call my parents for the wedding ceremony.’

(Yoneda 2009: 18)

Mbuun also shows a similar phenomenon. The applicative suffix marking a benefactive relation in (63a) also appears in (63b), where the benefactive relation is marked by a preposition together:

(63) Mbuun (Niger-Congo; Democratic Republic of the Congo [DRC])

a. *maam o-á-súmmé bá-án é-pis*
 mother SM1-PRS.PROG-buy.APPL NP2-child NP8-cloth

‘My mother buys cloths for the children.’

(Bostoen & Mundeke 2011: 190)

b. *mo-íb ó-á-dzúú máám ɔ'ngírá nke?*
 NP1-thief SM1-PRS.PROG-kill mother for what
ó-á-mó-dzwillé ɔ'ngira n-dzim? [sic]
 SM1-PRS.PROG-OM1-kill.APPL for NP9-money

‘Why does the thief kill mother?’ ‘He kills her FOR THE MONEY.’

(Bostoen & Mundeke 2011: 192)

Based on Kimenyi (1980), at least two of the Rwanda five applicative suffixes, the manner *-an* and the goal-location *-ir* may take applied arguments as prepositional phrases. According to Kimenyi, in (64d), the applied argument *kú mééza* ‘on the table’ is new information.

(64) Rwanda (Niger-Congo; Rwanda/DRC)

a. *bâno báana ba-rá-kor-an-a imyaambaro*
 these children they-PRES-work-MANN-ASP clothes
í-sháa-je
 they-be.old-ASP

‘These children are working in old clothes.’

(Kimenyi 1980: 84)

b. *umugóre a-ra-andik-an-a n'ûmugabo*

woman she-PRES-write-ASS-ASP with.man

‘The woman is writing with the man.’

(Kimenyi 1980: 33)

c. *ábáana ba-ra-kin-a amákáráta kú mééza*
children they-PRES-play-ASP cards on table

‘The children are playing cards on the table.’

(Kimenyi 1980: 36)

d. *ábáana ba-ra-kin-ir-a amákáráta kú mééza*
children they-PRES-play-APPL-ASP cards on table

‘The children are playing cards on the table.’

(Kimenyi 1980: 36)

As mentioned in 2.3.1.2.1, Harris (2015) refers to Wolof *-e* applicative constructions in which peripheral marking of the applied argument is retained as “hybrid” cases, providing examples of the applicative suffix *-e* like below. In each of (65a) and (65b), an applicative suffix and a preposition are used for a shared NP:

(65) Wolof (Niger-Congo; Gambia/Senegar)

a. *Faatu togg-e jën wi diw/ci waañ wi/nii*
Faatu cook-APPL fish the oil/in kitchen the/man.ADV

‘Faatu cooked the fish with oil/in the kitchen/in this way.’

(Dione 2013: 6)

b. *damay bind-e bataaxal bi ak big*
1SG.AFF write-APPL letter DEF1 with pen

‘I am writing the letter with a pen.’

(Harris 2015: 129,133)

The examples (66b) and (66c) are found in Valenzuela (2010), in which the applied arguments in *-kin* applicativization did not undergo promotion, retaining the case marking of the applied argument. These are contrasted with (66a), in which the applied argument underwent promotion, appearing as an absolute case NP.

(66) Shipibo-Konibo (Panoan; Peru/Brazil)

- a. *tita-n-ra* *papa* *wai* *oro-kiin-ai*
 mother-ERG-EV father:ABS chacra:ABS clear-ASSOC-INC
 ‘Mother helps father clear the chacra/clears the chacra with father.’
 (Valenzuela 2010: 131)
- b. *e-n* *mi-a* *jatibi* *jawéki-nin* *a-kin-ti* *iki*
 1-ERG 2-ABS all thing-OBL do.T-ASSOC-INF AUX
 ‘I will help you with everything.’
 (Valenzuela 2010: 133)
- c. *e-n-ra* *Tsoma* *nonti* *robi-kin-xon-ai*
 1-ERG-EV Tsoma:ABS canoe:ABS praise-ASSOC-BEN-INC
WexA *betan*
 WexA COM
 ‘I praise the canoe for Tsoma with WexA.’
 (Valenzuela 2010: 141)

Kambera also instantiates a similar phenomenon. For example, the same applicative verb *ngandi* takes a core-object in (67a) and takes a locative complement in (67b).

(67) Kambera (Malayo-Polynesian; Indonesia)

- a. *da-ngandi-nya* *na* *uhu* *i* *amo*
 3PL.N-take.for-3SGD ART rice ART father
 ‘They bring father the rice’
 (Klamer 1998: 200)
- b. *da-ngandi-ng* *li* *mbotu* *la* *angu-da* *patau*
 3PLN-bring-APPL story heavy LOC friend-3PL.G human
 ‘They-bring to la heavy story}[to their fellow humans}: They bring a difficult message to their friends.’
 (Klamer 1994: 145)

Also, in Huallaga Quechua, the applied argument of the benefactive applicative suffix *-pa* can either be core or non-core (Weber 1989: 155,159):

(68) Huallaga Quechua (Quechuan; Peru)

pay-ta

he-OBJ *aru-pa-yka-:* *karretera-ta*
pay-paq work-BEN-IMPV-1 road-OBJ
 he-PUR

‘I am working for him.’

(Weber 1989: 155)

Finally, in Maricopa, according to Lynn Gordon (personal communication, 2022), phenomena like (69c) are possible, in which the case suffix *-ly* appearing in (69a) and the applicative prefix *ily-* appearing in (69b) are used together for an identical argument (*‘ayuu=vqor* ‘fruit’):

(69) Maricopa (Yuman-Cochimí; Arizona)

a. *kwnho lames-ly ’-shvaw-k*
 basket table-in 1-put-REAL
 ‘I put the basket on the table.’

(Gordon 1986: 49)

b. *mat tdish ily-k-shvaw-k*
 earth corn in-IMP-put-REAL
 ‘Plant the corn in the ground.’

(Gordon 1986: 50)

c. *kwonho-ny-ly ‘ayuu=vqor ily-’-chaam*
 basket-DEM-in fruit in-1/3-put
 ‘I put the fruit in the basket.’

(Lynn Gordon, personal communication, 2022)

Languages which I recognize have applicative markers with optional promotion but which are not among my sample languages include Bemba (Niger-Congo; Zambia/DRC/Tanzania) and Tswana (Niger-Congo; Botswana/Republic of South Africa); see Martin (2003) and Creissels (2004; 2006) for details respectively.

2.3.1.2.3 No promotion option

Optional applicativization with no promotion option, the third type, is the most deviant from the prototypical applicativization (viz., applicativization with obligatory coding promotion). As mentioned in 2.2, Margetts & Austin (2007: 21) discuss such cases

with West Greenlandic and Teop examples, in which they consider oblique marking of the applied arguments is obligatory. My sample includes at least four languages which have this type of applicatives: Thulung Rai, Tariana, Mbuun, and rGyalrong, which are discussed in turn below.

Based on Lahaussais (2002), the Thulung Rai benefactive applicative suffix *-saŋ* does not seem to cause case-marking promotion or person-marking promotion. In the applicative construction (70b), the applied argument *a-lwak* ‘my brother’ bears the dative case-marker, the suffix *-lai*, which is also used in non-applicative constructions as in (70a):

(70) Thulung Rai (Sino-Tibetan; Nepal/India)

- a. *go beno-lai ghas phɔl-dzuul-to-m bu*
 1SG ox-DAT N.grass cut-PON-1SG/3.PST-NOM be.3SG

‘I have cut the grass for the ox (but will give it to him later).’

(Lahaussais 2002: 222)

- b. *go oram nem a-lwak-lai di-saŋ-pu7*
 1SG this house 1POSS-y.brother-DAT leave-BEN-1SG/3SG

‘I leave this house to my brother.’

(Lahaussais 2002: 213)

Aikhenvald (2003) shows that the instrumental applicative suffix *-ne* in Tariana does not cause promotion. In the following example, the instrumental case marker *-ne* is used without an applicative marker in (71a), and it is used even when there is an applicative marker having that instrumental NP as its applied argument (71b):

(71) Tariana (Arawakan; Amazonia)

- a. *ne itawhya-ne di-uka di-rahta*
 then canoe-INST 3SG.NF-arrive 3SG.NF-sail

‘Then he went by canoe.’

(Aikhenvald 2003: 152)

- b. *i-na pa-hya-nipe-ne-ka nu-wape-ta nuhua*
 2PL-OBJ IMP-eat-NOMZR-INS-DECL 1SG-wait+CAUS1-CAUS2 I

‘I am working for you with food.’ or ‘I have waited for you with food (lit., with something to eat)’.

(Aikhenvald 2003: 238)

According to Bostoen & Mundeke (2011), Mbuun locative applicativization by *-e* is only possible when there is a corresponding locative prepositional phrase. It is not that promotion is impossible no matter which semantic role *-e* encodes: when it encodes benefactive, recipient, malefactive, purpose, or reason, promotion is possible. Thus, *-e* can be interpreted to be an applicative marker whose promotion is impossible under the condition that the role of the applied argument is locative. Below is an example. The locative preposition *ɔ* at the beginning of the sentence (72a) is retained when an applicative marker is used for the same locative NP (72b):

(72) Mbuun (Niger-Congo; Democratic Republic of the Congo [DRC])

- a. *ɔ m-bvun mo-á-láám táár m-bíts*
 LOC NP9-field SM18-PRS.PROG-cook father NP9-meat
 ‘In the field, my father is preparing meat.’

(Bostoen & Mundeke 2011: 188)

- b. *ɔ m-bvun mo-á-léémmé táár m-bíts*
 LOC NP9-field SM18-PRS.PROG-cook.APPL father NP9-meat
 ‘In the field, my father is preparing meat.’

(Bostoen & Mundeke 2011: 188)

Both Nagano (2018) and Nagano (2021) provide the following example as the only example of benefactive applicative constructions in rGyalrong. I have no means to know whether the postposition is essential or not, so that benefactive applicativization in rGyalrong may be either with optional promotion or with no promotion option:

(73) rGyalrong (Sino-Tibetan; Sichuan)

- wuʃo w-əndiʔ w-əʃhes suwe ta-na-šmo*
 3SG 3SG.GEN-friend 3SG.GEN-for barley PST-APP-rob
 ‘(I hear that) He stole barley for his friends.’

(Nagano 2018: 118; 2021: 294)

Other languages which I recognize have applicativization with no promotion option

include Kaqchikel (Mayan; Guatemala). For details and references, see 5.3.2 in Chapter 5.

2.3.1.4.4 Summary of the typology of optional applicativization in terms of applicability of promotion

Consequently, the classification that was exhibited and the example languages can be summarized as in (74). Languages not included in my applicative sample are in parentheses.

(74) Types of optional applicativization distinguished according to optionality and obligatoriness of coding promotion

- a. optional applicativization with optional coding promotion: Ainu, Taba, Swahili, Herero, Mbuun, Wolof, Maricopa, Chechen-Ingush, Shipibo-Konibo, Kambera, (Bemba), (Tswana)
- b. optional applicativization with obligatory coding promotion: Tukang Besi, Javanese, Katukina-Kanamari, Koyra-Chiini, Kolyma Yukaghir, Warrongo, Maasai, K'iche', (Ixil), (Classical Yucatec)
- c. optional applicativization with no promotion option: Thulung Rai, Tariana, Mbuun, rGyalrong, (Kaqchikel)

2.3.2 Valency-increasing

As already indicated, valency-increasing in applicativization can be divided into syntactic-valency-increasing and semantic-valency-increasing.

2.3.2.1 Syntactic-valency-increasing

Valency-increasing typically refers to syntactic-valency-increasing. In the Wolof example (2), which is repeated here as (75), valency-increasing may be observed in that the applicativized verb in (75b) takes an instrumental core argument, while the non-applicativized verb in (75a) takes an instrumental peripheral argument.

(75) Wolof (Niger-Congo; Senegal/Gambia/Mauritania)

- a. *mungi lek **ag** kuddu*

PRES.3SG eat with spoon

‘He is eating with a spoon.’

(Comrie 1985: 318)

b. *mungi lekk-e kuddu*

PRES.3SG eat-APPL spoon

‘He is eating with a spoon.’

(Comrie 1985: 318)

2.3.2.2 Semantic-valency-increasing

As suggested, applicative markers with optional promotion or no promotion option are still applicative markers, even when they don’t cause promotion. If so, applicative markers with optional promotion must have some applicative property aside from promotion. What property may that be? Touratier (1994), cited by van Laer (2010: 372), mentions “expressivity” for the Latin case. Marten (2003), cited by Peterson (2007: 50) and Nakamura (2012: 50), recognizes “concept strengthening” for the Swahili and Bemba cases. Creissels (2006: 83) mentions that Tswana applicative markers are “like discourse markers”. Nakamura (2012: 27-31) discusses a discourse effect of applicativization whereby the applied arguments “serve as a topic in the subsequent discourse”. However, none of these effects is pertinent to the defining properties of applicativization: valency-increasing or promotion.

Beck (2009) provides a key for understanding such constructions in terms of valency-increasing. As discussed in Chapter 2, he introduced the notion of semantic-valency-increasing into the discussion of applicativization by stating that, in applicativization, syntactic-valency increases because semantic-valency increases. However, Beck (2009)’s definition of applicativization does not treat syntactic-valency and semantic-valency in equal terms, according to which semantic-valency increasing must accompany syntactic-valency-increasing. This means that cases in which the applied argument is coded by zero anaphora, a possibility Beck (2009: 535) himself seems to recognize as “the expression of implicit participants”, is not considered applicative construction by his definition.

Below is such an instance of zero anaphora applicativization, in which the applied argument is not expressed overtly. The semantic role of the applied argument here is thought to be source:

(76) Rama (Chibchan; Nicaragua)

- a. *naing taata ka na-ngalbi-u*
my father PSP/from 1-run-TNS
'I ran away from my father.'

(Craig 1990: 127)

- b. *ka-na-ngalbi-u*
RP/from-1-run-TNS
'I ran away from him.'

(Craig 1990: 127,132)

The present study will treat such cases as applicatives as well. Below, in order to support the idea that semantic-valency-increasing is a primary function of applicativization on a par with syntactic-valency-increasing, evidence for the existence of semantic-valency-increasing will be discussed, by means of zero anaphora applied argument cases.

In Ainu, attaching the applicative prefix *e-* to a verb suggests that there is an unspecified place that the speaker is considering where the action or state denoted by the verb is realized. Its evidence is found in the fact that, when the location NP is not overtly expressed, the prefix *e-* indicates that there is some covert location NP, in which case the applied argument can be considered coded by zero anaphora, as in:

(77) Ainu (isolate; Japan)

- | | | | | |
|-----------------|-----------------------|-----------------------|---------------------|--------------------|
| <i>kapar-pe</i> | <i>kasa</i> | <i>kamuiranke-tam</i> | <i>kani-uwokkut</i> | <i>kani</i> |
| thin-NMLZ | hat | godgiven-sword | golden-belt | cotton |
| <i>kosonte</i> | <i>a-ko-ebittekka</i> | <i>atusa</i> | <i>numi</i> | <i>a-e-tursere</i> |
| cloak | I-APPL-tear_off | naked | stature | I-APPL-fall |
- 'I tear off his thin hat, god-given sword, golden belt and cotton cloak, and knocked his naked body down (there).'

(Kannari & Kindaichi 1963: 65)

The prefix *e-* appearing in (77) is explained by Kyōsuke Kindaichi in Kannari & Kindaichi (1963: 65) (*Yukar Vol. 3*) as an element meaning 'there'. This can safely be identified with the applicative prefix *e-*. Thus, it is possible to say that *e-* has the force of semantic-valency-increasing in every case, including when it does not cause syntactic-

valency-increasing as in (77).

Another example is available from Kope. In (78a) below, the verb *aa'o* ‘say’ is used twice without applicative marking, and it is not highlighted to whom in particular the father and mother are directing their words. To me, the following analysis seems to be possible: when the same verb (*aa'o* ‘say’) is used and the identity of the addressee is to be highlighted, a postposition or the applicative prefix *Vm-* is used, like in (78b), (78c), and (78d). (78b) employs a postpositional strategy (by *-ido*), (78c) and (78d) an applicative strategy. (78c) employs zero anaphora, showing semantic-valency-increasing:

(78) Kope (Kiwaian; Papua New Guinea)

- a. *ida ao-ro aa'o-i=ka, "Boo! rimo hibaa." ida*
 then father-NOM say-?=DECL stop 1PL crocodile suddenly
aio-ro p-aa'o, "Aa'a uia-i=ka
 mother-NOM D.PST-say no cassowary-DET=DECL
 ‘Then father said, “Stop! We (have) a crocodile.” Then mother said, “No, it is a cassowary.”’

(Schulz & Petterson 2022: 48)

- b. *kaida p-aa'o-mo nu-ido*
 then FAR-say-PL 3S-GOAL
 ‘And then they said to him.’

(Clifton 1995: 51)

- c. *ida i-m-aa'o-ka nu-ro*
 then PA-APPL-say-DEC 3S-SUB
 ‘Then he told them.’

(Clifton 1995: 51)

- d. *Uei-ro Uei go'ooto uubi i-m-aa'o-ka, "...*
 Uei-SUB Uei village people PA-APPL-say-DEC
 ‘Uei told his village people, “...’

(Clifton 1995: 51,57)

A further example is from Tariana. The goal applied argument of the applicative suffix *-ta* in (79b) is not overtly expressed, whereas it is the presence of *-ta* which signals that the speaker intends to include the information into the utterance about where the

canoe is supposed to be put:

(79) Tariana (Arawakan; Amazonia)

- a. *diwhida* *na-pisa* *na-pala-pidana*
3SGN.F+head 3PL-cut 3PL-put-REM.PAST.INFR
'They cut his head and put (it).'

(Aikhenvald 2003: 281)

- b. *ita-whya* *hi-nuku* *pi-pale-ta*
canoe-CL:CANOE DEM:ANIM-TOP.NON.A/S 2SG-put+CAUS1-CAUS2
'Put the canoe here.'

(Aikhenvald 2003: 281)

From these examples, it can be seen that, theoretically, an applicative marker necessarily indicates that an argument with a certain semantic role is involved in the event described, regardless of whether it is overtly expressed or not. Thus, it is considered that every case of applicativization without coding promotion also causes semantic-valency-increasing, a kind of valency-increasing.

As further support, in terms of discourse, when the applied argument occurs after the applicative marker like in (2b) in Chapter 1 for example, the applicative marker has a function of announcing that an argument of a certain semantic role will follow. This function remains regardless of whether promotion occurs or not, and I consider that this is another aspect of semantic-valency-increasing. It is also worthwhile here to recall the "reminding function" discussed with regard to the Ainu example (54a) in 2.3.1.2.2.

2.3.2.3 Relationship between syntactic-valency-increasing and semantic-valency-increasing

It should be noted that syntactic-valency-increasing does not presuppose semantic-valency-increasing, and vice versa. In cases where the applied argument is coded by zero anaphora and cases where promotion does not occur, like in the examples discussed above, syntactic-valency-increasing does not occur but semantic-valency-increasing occurs. To the contrary, in some cases of theme applicativization, like the Yucatec Maya case below (80), semantic-valency-increasing does not occur but syntactic-valency-increasing occurs: the existence of something or somebody mocked at is innately suggested by the

lexical semantics of the verb ‘mock’ before it is applicativized (80a), and by applicativization, the verb increases its valency by being able to take that theme argument as a direct object (80b)¹⁷.

(80) Yucatec Maya (Mayan; Belize/Mexico)

- a. *h p’aa’s-nah-en*
 PRV mock-AMPL-ABS.1SG
 ‘I mocked (sth./sb).’

(Lehmann & Verhoeven 2006: 474)

- b. *t-in p’a’s-t-ah le ba’x t-u mèt-ah-o’*
 PRV-SBJ.1.SG mock-TRR-CMPL DEF thing PRV-SBJ.3 do-CMPL-D2
 ‘I mocked / criticized the thing he did.’

(Lehmann & Verhoeven 2006: 474)

2.4 On paraphrase

The relationship between an optional applicative construction and a non-applicative construction with the same basic meaning can be considered a relationship of paraphrase. For example, both conversions from (81a) to (81b) and from (81b) to (81a) can be said to be paraphrase, with the same basic meanings:

(81) Wolof (Niger-Congo; Senegal/Gambia/Mauritania)

- a. *mungi lekk ag kuddu*
 PRES.3SG eat with spoon
 ‘He is eating with a spoon.’

(Comrie 1985: 318)

- b. *mungi lekk-e kuddu*
 PRES.3SG eat-APPL spoon
 ‘He is eating with a spoon.’

(Comrie 1985: 318)

¹⁷ If applicativization is defined as something coding semantically (rather than syntactically) peripheral argument as a core argument (as some authors do, including Peterson (2007)), theme applicativization such as this example seems to get difficult to pass as applicativization.

Here, the property of paraphrase caused due to addition or removal of applicative markers will be discussed, because, as will be elaborated below, the present study’s definition of applicatives concomitantly allows applicativization to interact with paraphrase in many places, so that exploring the diachrony of applicativization links to exploring the diachrony of paraphrase in some cases.

Let us do it by contrasting paraphrase with promotion in applicativization. “Promotion” is a term with the assumption that a non-applicative counterpart is more basic or primary with regard to the applicative construction, whereas “paraphrase” is a term (also used by Peterson (2007) and Dixon (2012) with regard to applicativization) which views the two constructions to be equal in terms of semantic similarities, suggesting that they are utterances made through distinct ways of cognition of the same event by the speaker. “Paraphrase” is the more neutral, not presupposing which is the basic counterpart or derived counterpart. The states of affair “paraphrase” can refer to is wider than those “promotion” can refer to, so that, in some cases, paraphrase occurs while promotion does not occur (for example, in applicativization with no promotion option).

The conversion from (82b) to (82a), for example, is a paraphrase, but is not an applicativization, because, seen from this particular direction, the applicative marker is removed instead of being added. Paraphrase accompanied by addition of an applicative marker is qualified as applicativization, even if no promotion or syntactic-valency-increasing accompanies. Therefore, any pairs of the three: an applicative strategy, a non-applicative strategy, and the combination of the two strategies, realize a paraphrase relationship if the basic meanings of the constructions are the same. Conversion of any of the three into any another may be seen as a paraphrase, six patterns being possible in total. However, a promotion relationship is only applied to between (82a) and (82b); and besides, it is in the direction from (82a) to (82b), not the other way around, thus only one pattern being possible, which is discernible as a paraphrase in addition.

(82) Taba (Malayo-Polynesian; Indonesia)

- | | | | | |
|----|--------------|-------------|--------------|-----------|
| a. | <i>ntek</i> | <i>woya</i> | <i>botol</i> | <i>li</i> |
| | <i>n=tek</i> | <i>woya</i> | <i>botol</i> | <i>li</i> |
| | 3SG=scoop | water | bottle | LOC |

‘He’s scooping out water from the bottle.’

(Bowden 1997: 380)

- b. *nteko* *woya* *botol*
n=tek-o *woya* *botol*
3SG=scoop-APPL water bottle
‘He’s scooping out water from the bottle.’

(Bowden 1997: 380)

- c. *nteko* *woya* *botol* *li*
n=tek-o *woya* *botol* *li*
3SG=scoop-APPL water bottle LOC
‘He’s scooping out water from the bottle.’

(Bowden 1997: 245, 380)

Another difference between them lies in the fact that “paraphrase” is a construction-level operation, something applied to a whole construction, while “promotion” is an NP-level operation, something applied to an NP. When faced with a set of basic construction and an applicative construction with the same basic meaning in which promotion occurred like the direction from (82a) to (82b), either promotion view or the paraphrase view is possible.

The definition of applicativization the present study follows is based on the promotion view, since it considers valency-increasing and promotion as defining properties of applicativization. Moreover, the present study focuses on the difference of morphosyntactic treatments of the argument in question according to whether it is an applicative construction or not, rather than on the cognitive or semantico-pragmatic differences. Thus, the promotion view is important for the purpose of the present study.

Meanwhile, however, the paraphrase view is also important for the following reasons. First, when applicativization with optional promotion does not cause promotion, cases that are covered by the present study’s definition of applicatives owing to the semantic-valency increasing, the term “paraphrase” can capture the relationship between the applicative constructions and the original non-applicative counterpart instead of the term “promotion”, like the relationship between (82a) and (82c).

Second, as promotion presupposes paraphrase, paraphrase, in turn, can be investigated in historical terms so that the way in which paraphrasing strategies evolved

in relation to applicative markers' evolution would be uncovered. This is an important point for the purpose of the present study, and will be discussed in Chapter 7, with the idea of seeing in parallel applicative markers and case-markers/adpositions.

Those two views do not conflict with each other but coexist, and the present study will keep both points of view in mind.

2.5 Optionality and obligatoriness of applicativization

There are applicative constructions to which neither promotion or paraphrase is applicable. This is obligatory applicative construction, introduced in 1.4.4 in Chapter 1, and this is another phenomenon than nondirect applicatives or oblique applicatives whose status is different from prototypical applicatives, and makes defining applicatives complex. This section will examine what obligatory applicatives mean in light of the present study's definition of applicatives, which is necessary also for discussing the diachronic typology of obligatory applicatives, which will be done in Chapter 6.

Below is another example of obligatory applicativization than the one shown in Chapter 1, which is from Southern Sierra Miwok. It does not have a construction using a case-marking or adposition instead, because the language lacks dative case and indirect object (Freeland 1951: 24), thus being obligatory.

(83) Southern Sierra Miwok (Yok-Utian; California)

ʔenyh-ka-ni

make-him-for

'Make it for him!'

(Broadbent 1964: 75)

Several authors including Creissels (2006), Peterson (2007), and Dixon (2012) suggest difficulty in determining whether to admit obligatory applicative constructions as applicative constructions due to the absence of non-applicative paraphrases. The reason why Peterson (2007: 51) does not exclude obligatory applicatives from his definition of applicatives is that doing so will only leave "few constructions", since it is often hard to know whether applicatives in a language are obligatory or not because of the lack of information. Aside from this good practical reason, let us think about obligatory applicatives in light of the present study's definition of applicatives.

In terms of the present study's definition of applicatives, the major point that makes it difficult to treat obligatory applicatives as prototypical applicatives is that, in obligatory applicativization, promotion is by no means possible because no NP with the same relation can appear as an oblique-marking NP: an obligatory construction is an isolating entity, so that promotion of an NP is not supposable in connection with another construction. In this regard, apparently, obligatory applicatives fail to satisfy the condition of the present study's definition of applicatives. However, valency-increasing is possible to observe, as long as the verb carrying the applicative marker can be used without an applicative marker as well. For instance, in the Barupu example below, (84b) lacks non-applicative paraphrase and thus is an obligatory applicative construction (Donohue 2003: 114), but it can be identified with what (84a) becomes by undergoing semantic- and syntactic-valency-increasing: the semantic valency increases by the 'above' semantic role's being added to the thematic structure of the verb *vovo* 'circle', and the syntactic valency increases by the verb's opening a mandatory slot for an object.

(84) Barupu (Skou; Papua New Guines)

a. *k-o-vovo*

R-3SG.F-circle

'She circled.'

(Donohue 2003: 122)

b. *k-o-vovo-ya-i*

R-3SG.F-circle-above-3PL.M

'She circled above them.'

(Donohue 2003: 122)

In that sense, obligatory applicatives are distinguished from those constructions which have neither promotion nor valency-increasing.

Finally, cases should be noted in which an applicative marker and the base verb come to constitute an independent lexical verb: lexicalization. This results in obligatory applicative constructions, if the particular semantic fusion only happens between the applicative marker and the base verb, not between a non-applicative counterpart (case-marker/adposition) (if that exists at all) and the base verb. Consider the following Rama example, in which the combination of the verb *taak* 'go' and the associative applicative

prefix *yu-* results in a new lexical meaning ‘take, carry’ (85b), which is not the case in the combination of the same verb and the associative postposition *u* (85a):

(85) Rama (Chibchan; Nicaragua)

- a. *Kohki u an-taak-u*
Kohki PSP/with they-go-TNS
‘They went with Kohki.’

(Craig 1990: 129)

- b. *Kohki yu-an-taak-u*
Kohki RP/with-they-go-TNS
‘They took/carried Kohki.’

(Craig 1990: 129)

There are also examples which are difficult to examine in light of non-applicative paraphrases but which show more straightforward semantic fusions than the Rama example. For example, in Chichewa (Niger Congo; Southeast Africa), according to Baker (1988: 225), the combinations of the benefactive applicative suffix *-er* with the verb *gon* ‘sleep’ and the verb *yend* ‘walk’ result in *goner* ‘lie on’ and *yender* ‘inspect’ respectively, whose meanings are unpredictable from the components. Lexicalized applicatives can be considered “lexical obligatory applicatives”, as opposed to the obligatory applicatives discussed above, which can be referred to as “grammatical obligatory applicatives”. It is difficult to suppose promotion relationship between (85a) and (85b), to the extent that the meaning is substantially different despite the use of related elements. However, like in the case of grammatical obligatory applicatives, if the verb without an applicative marker is compared with the applicativized verb, valency-increasing will be recognized: ‘go’ is intransitive and ‘take/carry’ is transitive. Further problems about lexicalized applicatives, including those concerning their promotion and valency-increasing and non-deponent/deponent cases, will be discussed in detail in 6.2.2 in Chapter 6.

2.6 Summary

So far, I have noted two places where the concept of optionality and obligatoriness can be applied with regard to applicativization. The first one is promotion, and the second one is applicativization itself. These should not be confused, throughout the whole study.

Grammaticalness and lexicality of applicativization are related with the optionality and obligatoriness in each place. Therefore, four major types of applicativization can be distinguished in terms of optionality and obligatoriness as shown in Figure 1:

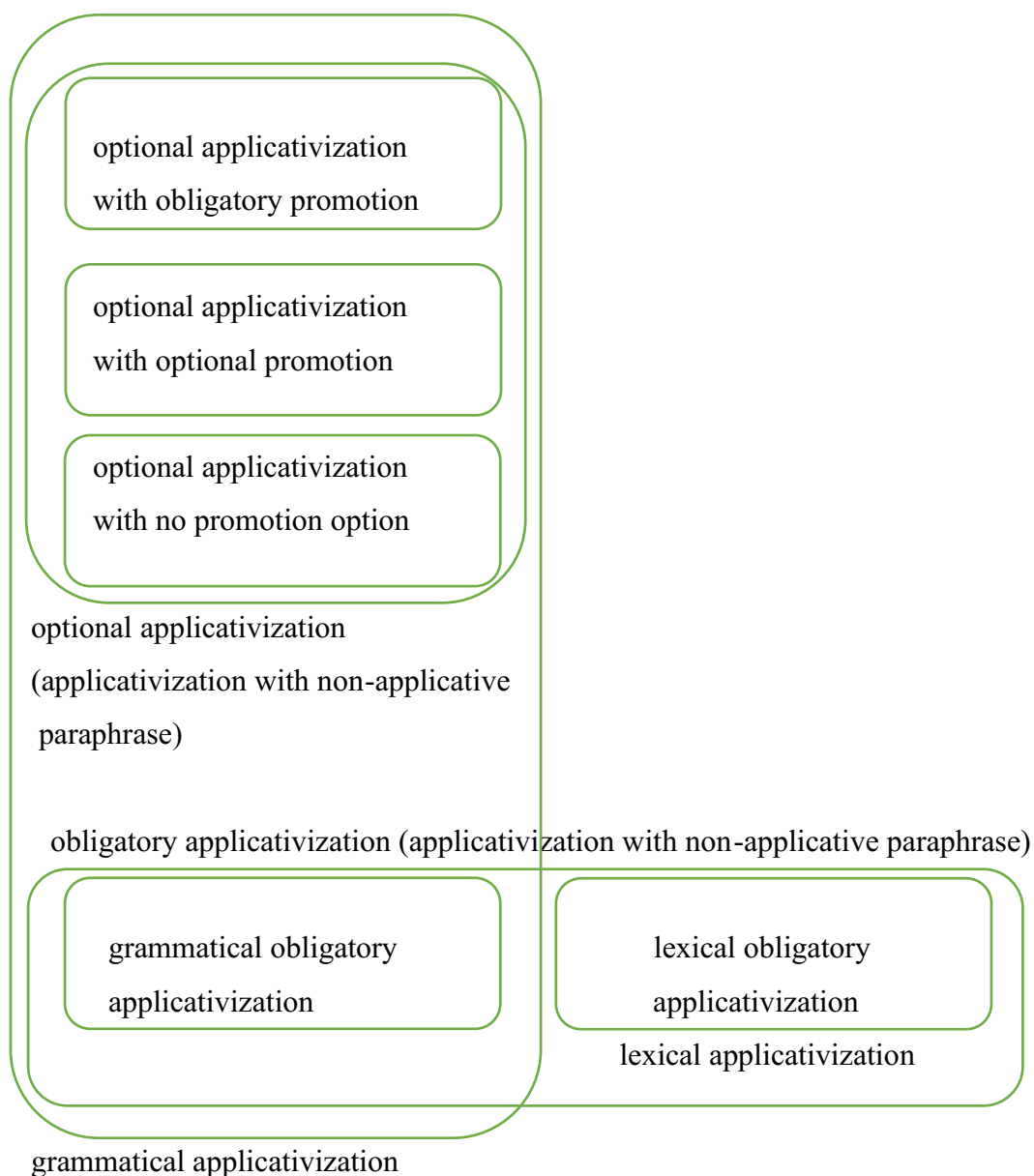


Figure 1. Types of optional and obligatory applicativization and their relationship

Based on the discussion made so far, in terms of possibilities of paraphrase and promotion and applicability of valency-increasing, the four types of applicative constructions are distinguished, as in Table 1. All of these will be in the scope of this study.

Table 1. Four types of applicativization

Paraphrase is possible	Promotion is possible	Valency-increasing	Applicativization type	Examples
no	no	yes (syntactic or semantic)	obligatory applicativization	Barupu, Southern Sierra Miwok, Rama
yes	no	semantic only	optional applicativization with no promotion option	Thulung Rai, Tariana, Mbuun, rGyalrong
yes	optional	yes (can be semantic only)	optional applicativization with optional promotion	Ainu, Taba, Swahili, Wolof, Mbuun
yes	obligatory	yes (both syntactic and semantic)	optional applicativization with obligatory promotion	Tukang Besi, Javanese, Katukina-Kanamari, Koyra-Chiini

3 How systems of applicative markers develop in particular languages

Now begins the main discussion. Firstly, in this chapter, noticing the fact that different languages have different systems of applicative markers in terms of the number of applicative markers and the nature of the meanings of the applicative markers, I aim to capture different backgrounds of my sample languages with a number of generalized diachronic models. Part of discussion made in this chapter will function as a basis of following chapters of the present study.

3.1 The number of applicative markers in a language and the number of meanings of an applicative marker

Languages which have applicative markers vary in terms of how many applicative markers they have. For example, Wolof, aside from the suffix *-e*, illustrated in (2) in Introduction, has another applicative marker, the suffix *-al*:

(86) Wolof (Niger-Congo; Gambia/Senegar)

Faatu jaay-al ma ko jën
Faatu sell-APPL 1SG 3SG fish
'Faatu sold him fish for me.'

(Dione 2013: 4)

Just as a language may have more than one applicative marker in this way, an applicative marker may have more than one meaning. For example, the Kope applicative prefix *Vm-* has plentiful possibilities of which semantic role it encodes in individual usages, encompassing benefactive (87a), recipient (87b), and addressee (87c):

(87) Kope (Kiwaian; Papua New Guinea)

a. *ka nu go'oto uubi boomoi aiha p-i-m-ai'ia*
and 3S village people pig ASRT FAR-PA-APPL-kill
'He killed a pig for his village people.'

(Clifton 1995: 57)

- b. *irai nimo mereei-ro r-i-m-oha-duumo nau-ka*
but 1P person-SUB 1-PA-APPL-give-PR thing-DEC
'But our children gave us things.'

(Clifton 1995: 50,56)

- c. *Uei-ro Uei go'ooto uubi i-m-aa'o-ka, "...*
Uei-SUB Uei village people PA-APPL-say-DEC
'Uei told his village people, "...'

(Clifton 1995: 51,57)

This is contrastive to the Georgian applicative prefix *a-*, which only can encode a single semantic role, which is a locative role:

(88) Georgian (Kartvelian; Georgia)

- a. *k'onvert'-s misamart-s ac'ers*
envelop-DAT address-DAT write.APPL.PRES.S3S.O3
'He writes the address on the envelop.'

(Creissels 2006: 74)

- b. *is da-v-Ø-a-xat'-e ma-s*
3SG.NOM PV-S1-IO3-PRV-paint-AOR 3SG-DAT
'I painted it on it/him/her.'

(Boeder 2005: 35, cited in Kojima 2012: 224)

Those two parameters, namely, how many applicative markers a language has and how polysemous an applicative marker is, were previously associated with each other, leading to the observation that, if a language has a few applicative markers, then they are somewhat likely to have a wide range of meanings, while, if a language has a lot of applicative markers, then they tend to only have limited meanings (Kiyosawa & Gerdts 2010: 345-352; Dixon 2012: 312-318; Wunderlich 2015: 1448). Kiyosawa & Gerdts (2010: 346) illustrates an applicative system using a single applicative morpheme that has generalized meanings by the suffix *-xi* in the Northern Interior Salish languages, which can encode a dative, benefactive, malefactive, possessor, and source roles. Kiyosawa & Gerdts (2010: 348) also illustrates an applicative system using multiple applicative morphemes each of which has a specialized meaning, by the Halkomelem applicative

suffixes *-lc* and *-as*, specialized for dative and benefactive roles respectively. Kiyosawa & Gerds (2010: 350) further mention “partially-general systems”, citing *Tukang Besi* from Donohue (2001), which has both generalized and specialized applicative markers.

The tendency that, more applicative markers a language has, less semantic roles the applicative markers have seems to be the only typological finding concerning relationships between how many applicative markers a language has and how many semantic roles an applicative marker possibly encodes, and this tendency, as will be discussed later, seems to be consistent with my sample as well. However, there has been no attention in typological perspective paid for the diachronic backgrounds of the number of applicative markers a language has, the number of semantic roles they may encode, and their relationships.

It is possible to provide diachronic models of through what process the number of applicative markers in a language and the number of semantic roles of the applicative markers emerged. The present chapter is a case study of this, based on a particular set of sample languages. The starting point to do this is noticing that there are some synchronic appearances signaling that different historical processes are applicable in different cases. First of all, differences in resulting statuses of the number of applicative markers or the number of semantic roles of the applicative markers connote differences in their background historical process. For example, when a language has two applicative markers, it can be the case that a single diachronic source yielded two applicative markers, but when a language has a single applicative marker, this possibility is virtually inapplicable. In addition, there are cases in which multiple applicative markers appear to be historically related from their formal or semantic similarities. In such cases, a historical model is applicable as is distinguished from one applied for cases in which multiple applicative markers are not historically related.

Although I will provide different diachronic models starting from the three perspectives (viz., the number of applicative markers in a language, the number of semantic roles of an applicative marker, and historical relatedness among applicative markers), I will only discuss patterns which have instantiations in my sample languages. Thus, the diachronic models to be established are supposed to be comprehensive only in the sense that the collection of them provides a uniform framework for capturing the

diachronic backgrounds of the sample languages¹⁸.

First of all, it is adequate to discuss preliminary methodological issues of the three bases for conceiving different diachronic models: the number of applicative markers in a language, the number of semantic roles of an applicative marker, and historical relatedness among applicative markers. This will be done in 5.2. After that, diachronic models for single-applicative languages and multiple-applicative languages will be discussed in separate places, the former in 5.3 and the latter in 5.4. Finally, all the models will be gathered together, how the sample languages fall under different ones out of the established models will be summarized, and discussion will be provided in 5.5.

3.2 Preliminary methodological issues

3.2.1 The number of applicative markers

Observation throughout my database tells that a language can have from one to quite many applicative markers. For example, in my database, K'iche' and rGyalrong have only one applicative marker (the suffix *-b'e* and the prefix *na-* respectively), while Dholuo has two (the suffixes *-e* and *-ni*), and Ainu has three (the prefixes *e-*, *ko-*, and *o-*). The maximum cases in my database are Barupu and Nez Perce: Barupu has eight applicative markers, all of which are suffixes (*-ya-*, *-ke*, *-ta*, *-na*, *-i*, *-e*, *-o⁽¹⁾*, and *-o⁽²⁾*), and Nez Perce has eight applicative markers all of which are suffixes (see Rude 1991). The present chapter attempts dividing cases according to whether the numbers of their applicative markers are “one” or not. There are two reasons for adopting this as a criterion. The first is that “one” appears to be the most frequent (non-zero) number of applicative markers a language has, and languages with one applicative marker versus languages with more than one applicative marker constitute a relatively well-balanced opposition. The second is that, as will be mentioned in 5.2.3, the present study is interested in the fact that a language can have multiple applicative markers which are either historically related with one another or not, and what factors there are that determine whether there is such a historical relationship in each case. Naturally, in a given language, an applicative marker cannot have a cognate applicative marker only if the language has a single applicative

¹⁸ Therefore, the framework is supposed to augment if more logically possible patterns prove to be existent by examining more languages in further studies.

marker. Thus, also in this sense, classifying first of all cases with only one applicative marker and cases with more than one applicative marker is reasonable. I will refer to languages with the former systems as “single-applicative languages” and languages with the latter systems as “multiple-applicative languages”.

There is not always a straightforward criterion to count applicative markers in a language. For some languages, problems of ambiguity arise as to whether different forms should be regarded as allomorphs of a single morpheme or as distinct morphemes. For example, the Warrongo two applicative suffixes *-riL⁽¹⁾* and *-riL⁽²⁾* are only distinguished by the fact that different sets of semantic roles are allotted to intransitive base cases and transitive base cases; their phonological forms are identical (Tsunoda 1998). The Kolyma Yukaghir two applicative suffixes *-re* and *-ri* are differentiated by their vowel values, but semantic roles they encode have a substantial overlap: *-re* encodes locution, emotion, attitude, and gesture, while *-ri* encodes those four roles plus theme (Maslova 1999). Huallaga Quechua is a more typical case, where *-pa*, *-pU*, and *-pa:* are analyzed as three distinct applicative suffixes, when *-pa* and *-pU* encode beneficiary or maleficiary, and *-pa:* encodes beneficiary (Weber 1989). Nahuatl is outstanding in that different authors give different interpretations. According to Andrews (1975), Nahuatl has two distinct applicative suffixes: *-lia* and *-huia*. Meanwhile, Yasugi (2012) analyzes these two forms as allomorphs constituting a single applicative suffix. The present study tentatively follows Yasugi (2012) and considers that there is only one applicative suffix in Nahuatl: *-lia* (~ *-ia*, *-i*, *-huia*). As for Swahili, some authors, including Song (1996: 94), recognize the instrumental applicative suffix *-iish* (originally a causative marker) in addition to the more generalized applicative suffix *-i* (~ *-e*), while others do not. The present study follows Song (1996) and treats *-iish* as an applicative marker as well. As a result, of the 50 languages in my sample, 19 languages proved to be single-applicative languages:

(89) Single-applicative languages

Hualapai, Southeastern Tepehuan, Nahuatl, Yucatec Maya, K’iche’, Tariana, rGyalrong, Rawang, Thulung Rai, Kambara, Bantik, Kope, Motuna, Kalkatungu, Ngan’gityemerri, Tandroy, Koyra Chiini, Herero, Mbuun

Naturally, the remaining 31 languages are multiple-applicative languages:

(90) Multiple-applicative languages

Southern Sierra Miwok, Huallaga Quechua, Nez Perce, Creek, Dakota, Maricopa, Central Alaskan Yupik, Kogi, Rama, Winnebago, Kashibo-Kakataibo, Shipibo-Konibo, Katukina-Kanamari, Mosestén, Kolyma Yukaghir, Ainu, Chechen-Ingush, Georgian, *Tukang Besi*, Javanese, *Taba*, *Barupu*, *Warembori*, *Warrongo*, Amharic, Rwanda, Swahili, Wolof, Dholuo, Maasai, Kipsigis

3.2.2 The number of semantic roles of an applicative marker

As a similar distinction was made regarding the number of applicative markers in a language in 5.2.1, a distinction will be made between cases in which an applicative marker has a single meaning (let's call them a "single-meaning applicative marker") and cases in which an applicative marker has multiple meanings (let's call them "a multiple-meaning applicative marker"), similarly to in Kiyosawa & Gerdtz (2010), which distinguishes "specialized applicative markers" and "generalized applicative markers". This is mainly for practical reasons that single-meaning applicative markers and multiple-meaning applicative markers constitute a well-balanced contrast and that it is difficult to make finer distinction than that between "one" and "more than one".

Obviously, the ability to encode alone different semantic roles is not a peculiarity of applicative markers, but is a property found in other linguistic means to encode semantic roles as well, like: case, adposition, or word order. However, while a burden of studies was produced concerning such polysemies of cases and adpositions, there is no cross-linguistic survey previously done about the polysemies of applicative markers. It is possible to apply findings made about meanings and polysemies of cases and adpositions to the cases of applicatives. Regarding meanings of cases, Malchukov & Narrog (2011: 518) say that "it is probably true that cases which are restricted to one specific meaning are rarer than cases subsuming several meanings", which seems to be true for applicative markers as well, judging from my database (as will be discussed later). Another relevant issue is that, according to Malchukov & Narrog (2011: 518-519), two types of polysemy of cases may be distinguished: polysemies arising through a merger of multiple cases into one and polysemies having a transparent semantic basis, the latter type being the more common. It is difficult to determine which factor, a semantic factor or a phonemic factor,

is at work in individual cases of polysemies of applicatives in my database, because of the lack of such information, although it is possible to establish diachronic models that take into account and cover either possibility. Regarding the semantically-derived polysemy, there are diachronic studies investigating cross-linguistically recurrent pathways whereby certain semantic roles extend (not losing the original meaning immediately) to certain other semantic roles in the process of grammaticalization. For example, the following is a model proposed by Heine et al. (1991):

(91) Chain of increasing grammaticalization of case functions

ABLATIVE > AGENT > PURPOSE > TIME > CONDITION > MANNER
 ALLATIVE COMITATIVE INSTRUMENT CAUSE
 LOCATIVE BENEFACTIVE DATIVE
 PATH POSSESSIVE

(Heine et al. 1991: 159)

Narrog (2014: 89) repolished this, as in Figure 2:

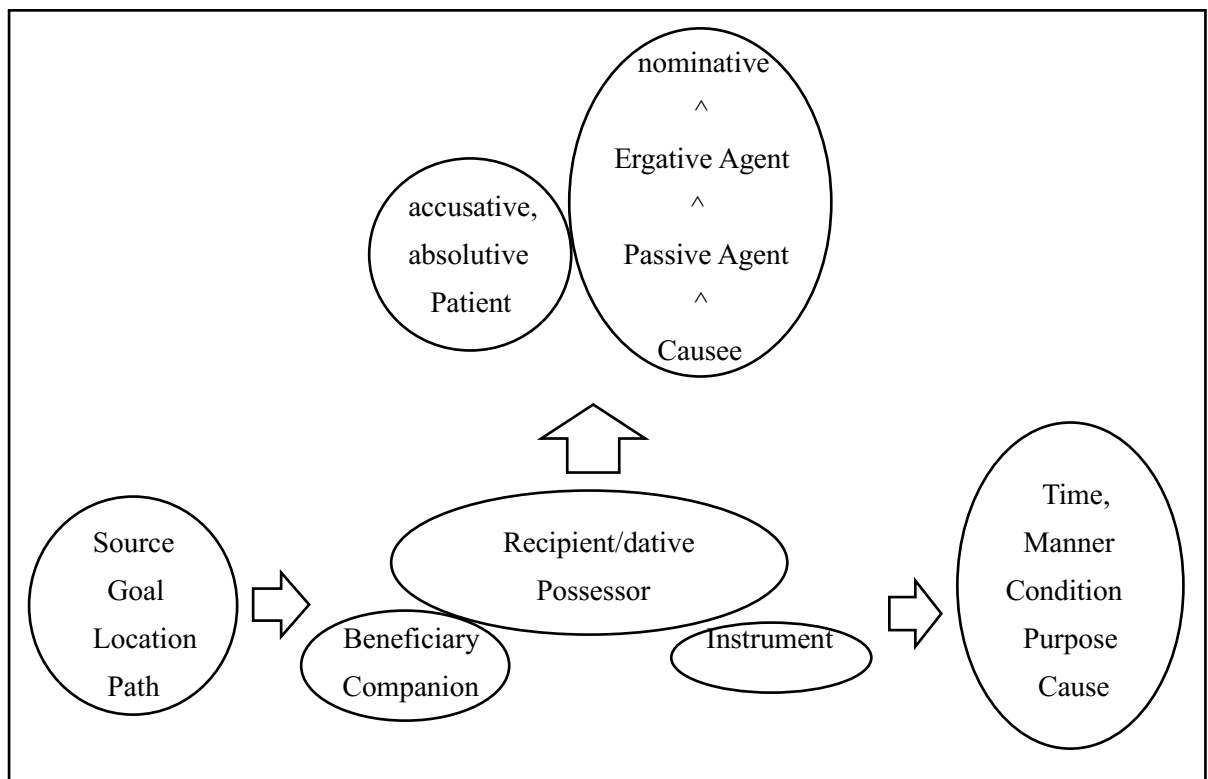


Figure 2. Map of increasing grammaticalization of case functions (Narrog 2014: 89)

The semantic roles appearing in Figure 2 except nominative, Ergative Agent, Passive Agent, and Causee, are, as far as I recognize, possible to be encoded by applicative markers. Listed below are categories of semantic roles (and cases) that can be applicativized distinguished in Figure 2 based on diachronic relationships:

(92) Diachronic grouping of semantic roles that can be applicativized, based on Narrog (2014)

- Source, Goal, Location, Path
- Beneficiary, Companion
- Recipient/dative, Possessor
- Instrument
- Time, Manner, Condition, Purpose, Cause
- accusative, absolutive, Patient

Although Heine et al. (1991) and Narrog (2014) do not integrate Malefactive into their grammaticalization relationships of the semantic roles, I suppose that it belongs to the same group as Benefactive, based on the cross-linguistic observation by Zúñiga & Kittilä (2010) that there are close relationships between these two semantic roles have. Thus, (92) may be revisited as follows:

(93) Diachronic grouping of semantic roles that can be applicativized, based on Narrog (2014), with addition of Maleficiary

- Source, Goal, Location, Path
- Beneficiary, Maleficiary, Companion
- Recipient/dative, Possessor
- Instrument
- Time, Manner, Condition, Purpose, Cause
- accusative, absolutive, Patient

Narrog (2014: 89) further notes extension relationships between spatial cases. However, for the purpose of the present study, I do not classify them into smaller groups, because they commonly convey spatial notions, and it is difficult to determine how to group them.

Also, strictly, as Narrog (2014: 89-90) notes, Time, Manner, Condition, Purpose, and Cause are supposed to be subclassified in the way done in (91) by Heine et al. (1991). However, because applicativization of these semantic roles are only rarely instantiated in my sample languages, I do not classify them into smaller groups. Note finally that accusative, absolutive, and Patient are supposed to be properties of applied arguments whose semantic roles are Theme.

The grouping in (93) can be used for a synchronic classification of semantic roles of applicatives. Thus, singleness and multiplicity of semantic roles of the applicative markers will be judged based on this grouping. If the semantic roles of an applicative marker fall into a single category appearing in (93), then, the applicative marker is said to have a single-meaning. If they fall into more than one category appearing in (93), then, the applicative marker is said to have multiple meanings. The former and latter applicative markers correspond to “single-meaning applicative markers” and “multiple-meaning applicative markers” respectively. For example, the Dakota addressee-possessive applicative prefix *ki-* (~ *kic 'i-*) and the Ainu location-goal applicative prefix *o-* are single-meaning applicative markers. In contrast, the Haulapai beneficiary-recipient-goal applicative suffix *-wo* (~ *-o, -y*) and the Katukina-Kanamari prefix beneficiary-malefactive-possessive applicative prefix *o-* are multiple-meaning applicative markers¹⁹.

3.2.3 Historical relatedness among applicative markers in a language

Faced with a language which has more than one applicative marker, it is possible that they are historically related somehow. There are three possibilities that can be distinguished:

- (94) Three patterns of historical relationship among applicative markers in a language
- Applicative markers all of which are historically related
 - Applicative markers some of which are historically related

¹⁹ It is often the case that different terms are used in individual language descriptions to talk about the same semantic roles, for example, “ablative” for “source”, “allative” for “goal”, “benefactive” for “beneficiary”, “possessive” for “possessor”, “accompaniment”, “associative”, or “comitative” for “companion”, etc. Also, “addressee” may be interpreted to be a part of Recipient/dative.

-Applicative markers none of which are historically related

As far as concerned with multiple-applicative languages, explicit information is not always available as to which applicative marker is historically related with which applicative marker. However, there are cases in which some applicative markers seem to suggest their historical relatedness by considerable similarities in forms or functions. There are also not straightforward cases in which it is uncertain whether some applicative marker is historically related with another. Such cases will be dealt with separately with caution. Kolyma Yukaghir may illustrate a case of historically related applicative markers in a language. As will be mentioned later, its two applicative suffixes *-ri* and *-re*, as appearing in (95a) and (95b) respectively, have structural similarities in addition to their obvious phonological similarity, which seems to suggest that they possibly share a historical origin:

(95) Kolyma Yukaghir (Yukaghir; East Siberia)

- a. *tude töwke-gele jaqte-ri:-m*
3SG dog-ACC sing-APPL-TR3SG
'(he) sang about his dog.'

(Nagasaki 2003: 16)

- b. *tet-ul aja:-re juö-t*
you-ACC rejoice-APPL(TR:1SG) [see-SS:IPFV]
'I am glad to see you.'

(Maslova 1999: 527)

3.3 Applicative systems with a single applicative marker

As mentioned in 3.2.1, single-applicative systems and multiple-applicative systems will be discussed separately. Let us begin the discussion with single-applicative languages rather than multiple-applicative languages, because the former is the simpler and provides a basis for discussing the latter. The single-applicative languages in my database, 19 in total, are listed in (96), a repetition of (89):

(96) Single-applicative languages

Hualapai, Southeastern Tepehuan, Nahuatl, Yucatec Maya, K'iche', Tariana,

rGyalrong, Rawang, Thulung Rai, Kambara, Bantik, Kope, Motuna, Kalkatungu, Ngan'gityemerri, Tandroy, Koyra Chiini, Herero, Mbuun

As a result of observation, it proved that three diachronic models may be distinguished based on my sample languages. These will be discussed in turn.

3.3.1 Applicative systems with a single applicative marker which has a single meaning

When a language has only one applicative marker (a single applicative marker), and the applicative marker has a single meaning, it is likely that the applicative marker already had a compatible stretch of semantic dimension when it arose from its immediate diachronic source, especially when it can be seen that the immediate source is also semantically homogeneous. When that is the case, the diachronic model depicted in Figure 3 is applied. The basics of how to read the diachronic models throughout this chapter is as follows. An entity in the right column stands for an applicative marker (however, also see note #5). An entity in left stands for an element which the applicative marker used to be in the past. An arrow stands for the change whereby the left entity became the right entity diachronically. An applicative marker represented by a circle has a single meaning. When an applicative marker has multiple meanings, an ellipsis will be used instead of a circle, as will be seen later.

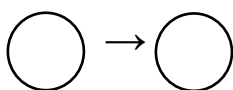


Figure 3. Diachronic change model of a single-applicative system (#1)

This pattern is hard to find, and out of the 19 single-applicative languages in my sample listed in (96), K'iche' and Southeastern Tepehuan are the only languages that seem to apply to this pattern. The K'iche' single applicative marker, the suffix *-b'e*, is dedicated for the instrumental role, illustrated in (97a) and (97b). It seems that the instrumental nuance is still present even when the whole described event could be interpreted in terms of a locative role for example, as in (97b).

(97) K'iche' (Mayan; Guatemala)

- a. *če:ʔ š-ø-in-č'aya-b'e-x a:w-e:h*
 wood ASP-3SG.ABS-1SG.ERG-hit-INSTR-TR 2SG.POSS-GEN

'I used a stick to hit you.'

(Campbell 2000: 278)

- b. *le: ačih le: b'o:la:x š-ø-u-t'uy-uli-b'e-x*
 the man the block.of.wood ASP-3SG.ABS-3SG.ERG-sit-post-INST-TR

'The man sat on a block of wood / the man used a block of wood to sit on.'

(Campbell 2000: 279)

The Southeastern Tepehuan single applicative marker, the suffix *-(i)dya*, can encode benefactive and comitative roles, which belong to a common domain according to (93). Below, the benefactive usage is illustrated in (98a) and (98b), and the comitative usage is illustrated in (98c). According to Willett (1991: 48), the suffix *-xi* as appearing in (98a) obligates the occurrence of *-(i)dya* after it. From this, it seems that the whole entity *-xi-dya* could be regarded as a beneficiary applicative marker. However, *-(i)dya* can encode a beneficiary role even without *-xi*, as in (98b).

(98) Southeastern Tepehuan (Uto-Aztecan; Mexico)

- a. *goc-ap jiñ-xava'ñ-xi-dya-' gu-cacarvax*
 two-2SG.S 1SG.DO-buy-BEN-APPL-FUT ART-goats

'Please buy two goats for me.'

(Willett 1981: 62)

- b. *tu-ñ-som-dya-'-ap gu-cutun*
 DUR-1S.DO-sew-APPL-FUT-2S.SG ART-blouse

'You will sew a blouse for me.'

(Willett 1981: 66)

- c. *xiv-añ jum-'ui'-dy-ica-' gu-tatcarui'*
 now-1SG.S 2SG.DO-go=to+PL-APPL-TR-FUT ART -chickens

'I'll bring the chickens to you (SG) right now.'

(Willett 1981: 68)

The single-applicative languages in my sample, the single applicative markers, and their meanings are shown in Table 2.

Table 2. Single-applicative languages, their applicative markers, and the meanings of the applicative markers

Language	Applicative marker	Meaning
K'iche'	<i>-b'e</i>	instrument
Southeastern Tepehuan	<i>-(i)dya</i>	beneficiary, companion

In this pattern, both of the number of applicative markers and the number of the semantic roles are restricted. In that sense, in terms of diachrony, it seems quite natural for this pattern to develop into more complex patterns through semantic extension, derivation of a new applicative marker from the single applicative marker, or independent emergence of a whole new applicative marker.

3.3.2 Applicative systems with a single applicative marker which has multiple meanings

In the cases in which a semantic extension or phonological merger happened, the model shown in Figure 4 is applied. An ellipse, as opposed to a circle, stands for a multiple-meaning applicative marker. When a circle and an arrow stretching from it are dotted, it means that they may be applicable or they may not, dependent on the individual case. In this pattern, the dotted set of a circle and an arrow is applicable when the polysemy is due to a phonemic merger of originally multiple applicative markers or originally multiple grammaticalization sources. To what degree they are multiple is determined by the value of p , signaling how many dotted circles there are.

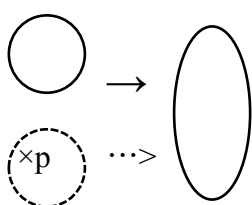


Figure 4. Diachronic change model of a single-applicative system (#2)²⁰

²⁰ While it may be common that semantic extension or phonemic merger which are ultimately responsible for multiple-meanings of an applicative marker happened after the applicative marker was completely

Table 3 below exhibits a list of relevant information of single-applicative languages whose applicative markers have multiple meanings in my database. I only illustrate a few languages out of them by example sentences, because it will take a burden of spaces to do the same thing for every language. A Bantik example is shown in (99), in which the Bantik single applicative marker, the prefix *pa-*, encodes instrumental (99a) and locative (99b) roles. Beside this, a Kope example is available from 3.1 above. Information sources of the remaining languages in Table 3 are the references mentioned in 1.3 in Chapter 1.

(99) Bantik (Malayo-Polynesian; Indonesia)

- a. *i-Heis ma-pa-nuri mu-tikin su-kapuna ene*
 I-Heis MA-PAN-touch NU-stick SU-dog that
 ‘Heis touches that dog with the stick.’

(Utsumi 2012: 120)

- b. *i-Remi ma-pa-mandaŋ nu-pisou=ne su-pun nu-teriŋ*
 I-Remi MA-PAN-test NU-knife=NI.3SG SU-tree NU-bamboo
 ‘Remi tries his knife on the bamboo.’

(Utsumi 2012: 120)

The two patterns depicted in Figure 3 and Figure 4 seem to be all and only possible patterns when there is only one resulting applicative marker. The fact that the majority of the single-applicative languages in my database instantiate the pattern depicted in Figure 4 rather than that depicted in Figure 3 is consistent with the tendency discussed in 3.1 that the applicative marker of a single-applicative language may tend to have multiple meanings.

grammaticalized, it is not impossible as well that it happened in prior to the completion of the grammaticalization of the source item into the applicative marker. Thus, what circles in the left column represent does not need to be applicative markers, but it may be the diachronic source of the applicative marker, depending on the case. This was not considered for individual cases, since what matters is whether semantic extension or phonemic merger happened at all that is responsible for the latest status of the applicative system, rather than when it happened.

Table 3. Single-applicative languages with multiple-meaning applicative markers, the applicative markers, and their meanings

Language	Applicative marker	Meaning
Thulung Rai	<i>-sa</i> (~ <i>-saʔ</i> , <i>-saɗ</i> , <i>-sat</i>)	beneficiary, recipient
Koyra Chiini	<i>-nda</i>	instrument, companion
Hualapai	<i>-wo</i> (~ <i>-o</i> , <i>-yo</i>)	beneficiary, recipient
Rawang	<i>-a</i>	beneficiary, possessor
Kope	<i>Vm-</i>	beneficiary, recipient, addressee
Kalkatungu	<i>-ɲcama</i>	beneficiary, maleficiary, recipient, possessor
rGyalrong	<i>na-</i>	beneficiary, location, possessor, maleficiary, theme
Kambera	<i>-ng</i>	goal, recipient, beneficiary maleficiary, location
Tariana	<i>-ita</i>	addressee, location, purpose, instrument
Motuna	<i>-jee</i>	goal of action, source of feeling, emotive action, possessor, beneficiary, maleficiary
Yucatec Maya	<i>-t</i>	experimental stimulus ²¹ , location, traversed entity, addressee
Ngangyiemerri	<i>-mi</i>	location, addressee, anything concerned with ‘eye’
Bantik	<i>paN-</i>	instrumental, location
Herero	<i>-ir</i>	beneficiary, maleficiary, possessor, purpose, goal, location, reason
Mbuun	<i>-e</i>	beneficiary, recipient, maleficiary, purpose, reason, location

²¹ “Experimental stimulus” is Lehmann & Verhoeven (2006)’s term for the thematic role of something like “his mother” in “he is annoyed with his mother” (p. 471).

3.4 Applicative systems with multiple applicative markers

Now let us move to the cases of multiple-applicative systems. The multiple-applicative languages in my database, 31 in total, are listed in (100), a repetition of (90):

(100) Multiple-applicative languages

Southern Sierra Miwok, Huallaga Quechua, Nez Perce, Creek, Dakota, Maricopa, Central Alaskan Yupik, Kogi, Rama, Winnebago, Kashibo-Kakataibo, Shipibo-Konibo, Katukina-Kanamari, Mosestén, Kolyma Yukaghir, Ainu, Chechen-Ingush, Georgian, Tukang Besi, Javanese, Taba, Barupu, Warembori, Warrongo, Amharic, Rwanda, Swahili, Wolof, Dholuo, Maasai, Kipsigis

In the cases of multiple-applicative systems, two kinds of differences can be considered that signal differences in diachrony: how many semantic roles that applicative marker can encode and historical relationship among the applicative markers. I will provide diachronic models by combining these two features for which my sample has instantiations. Three logical possibilities can be distinguished as to historical relatedness among a multiple-applicative system as in (101), a repetition of (94):

(101) Three patterns of historical relationship among applicative markers in a language

- Applicative markers all of which are historically related
- Applicative markers some of which are historically related
- Applicative markers none of which are historically related

It proved that all the three patterns described in (101) are found within my sample languages. Thus, the models will be discussed in order from this perspective, and multiplicity of meanings will be considered only when there is an instance to which it is applicable in my sample languages.

3.4.1 Systems with multiple applicative markers all of which are historically related

The pattern in which all the applicative markers are historically related is far from being a widely-observed one. Figure 5 shows the diachronic model for this pattern. The value of n determines the number of applicative marker sets sharing their diachronic

origins. The value of p determines to what degree the applicative markers are multiple in each case of the applicative marker sets sharing their diachronic origins.

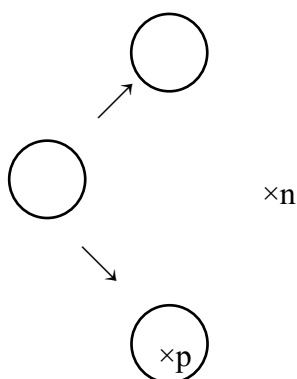


Figure 5. Diachronic change model of a multiple-applicative system (#1) ($n \geq 1, p \geq 1, n \in \text{natural numbers}, p \in \text{natural numbers}$)²²

Warrongo is the only language in my database that falls under this pattern. According to Tsunoda (1998), there are two applicative markers in Warrongo, which are suffixes $-riL^{(1)}$ and $-riL^{(2)}$. Tsunoda (1998) distinguishes two pieces of $-riL$ based on the distinction between intransitive and transitive bases, by reason that the semantics is comitative for intransitive bases whereas it is instrument for transitive bases:

(102) Warrongo (Pama-Nyungan; Australia)

- a. *rayi-Ø nyula nyina-ri-n*
 girl-ACC 3SG.ERG sit-V.COM-NFUT
 ‘He is sitting with a girl.’

(Tsunoda 1998: 348)

- b. *?ngana-Ø jarripara wuma nyina-ri-n*
 1PL-ERG good-ACC shade-ACC sit-V.COM-NFUT
 ‘We sat in a good shade.’

²² In this case as well, the circle in the left column does not need to be an applicative marker but it can be a source item of the applicative markers.

(Tsunoda 1998: 349)

Although Tsunoda (1998) does not explicitly mention that they are historically related with each other or not, I consider it to be likely because the only difference is the semantic role difference manifested by comitative and instrument.

The fact that Warrongo is the only language in my sample languages that applies to this pattern necessarily means that no cases are attested in my sample language in which all applicative markers are historically related and they include one which has multiple meanings. So, a model for such a case will not be discussed this time.

3.4.2 Systems with multiple applicative markers some of which are historically related

I mentioned that the pattern discussed in 3.4.1 is not widely observed. However, many languages which have historically related applicative markers additionally have, unlike Warrongo, one or more than one applicative marker which is not historically related with any of them. This means that, if only Warrongo had an applicative marker which is historically not related with $-riL^{(1)}$ and $-riL^{(2)}$, then Warrongo would fall into this type. Languages in my database that actually fall into this pattern are: Southern Sierra Miwok, Huallaga Quechua, Mosestén, Kolyma Yukaghir, Barupu, Warembori, and Rwanda, each of which will be discussed below. Figure 6 shows the diachronic model for this pattern. The value of n determines the number of applicative marker sets sharing their diachronic origins. The value of p determines to what degree the applicative markers are multiple in each case of the applicative marker sets sharing their diachronic origins. The value of m determines the number of applicative markers historically not related with any other applicative marker in that language. In this pattern, only two languages were attested from my sample languages in which a resulting applicative marker has multiple-meanings: Kolyma Yukaghir and Warembori. However, I will not further separate the models based on the singleness and multiplicity of meanings, but just note that these two languages are peculiar in that sense, to avoid a further complexity.

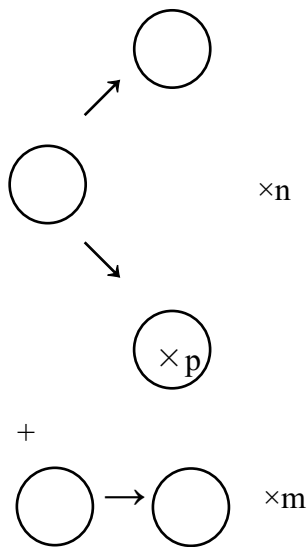


Figure 6. diachronic change model of a multiple-applicative system (#2) ($n \geq 1$, $m \geq 1$, $p \geq 1$, $n \in$ natural numbers, $m \in$ natural numbers, $p \in$ natural numbers)

3.4.2.1 Southern Sierra Miwok

I consider that the Southern Miwok applicative suffixes *-na* (benefactive) and *-nY* (benefactive), illustrated in (103a) and (103b) respectively, are likely of common origins, judging from their phonological and semantic similarities. Although the source literature does not offer any clarification, this possibility is at least more plausible than the possibility that they originate through completely separate developments. Beside those two markers, Southern Sierra Miwok has other applicative markers, which are the suffix *-pa* (locative), illustrated in (103c), and *-tuku* (malefactive) (Freeland 1951: 108). From the phonological or semantic differences, I suppose that *-pa* and *-tuku* has nothing to do with *-na* or *-nY* in historical terms, and they are separate developments from them.

(103) Southern Sierra Miwok (Yok-Utian; California)

- a. *?enyh-ka-na*
he.make-him-APPL
'He made it for him.'

(Broadbent 1964: 75)

- b. *kalaŋ-nY*

dance-APPL
'to dance for'

(Broadbent 1964: 75)

c. *toʔ-pa*

sit-APPL
'to sit on (it)'

(Broadbent 1964: 75)

3.4.2.2 Huallaga Quechua

Huallaga Quechua has five applicative markers in total: *-shi* (accompaniment) (104a), *-pa*: (benefactive, malefactive) (104b), *-pU* (benefactive, malefactive) (104c), *-pa* (benefactive) (104d), and *-pa:ri* (benefactive) (104e). As many as four out of its five applicative markers look historically related with each other, all involving benefactive or malefactive meanings. These are illustrated below.

(104) Huallaga Quechua (Quechuan; Peru)

- a. *pampa-shi-ykU-ma-y* *awkin!*
bury-ACCOM-IMPACT-1-2IMP old:man
'Please help me bury him, old man!'

(Weber 1989: 154)

- b. *Hwan ollqo-pa-q* *Pablu-ta*
John become:angry-BEN-NRP Paul-OBJ
'John became angry with Paul.'

(Weber 1989: 156)

- c. *y mayu-man hita-pu-shu-na-yki* *ka-yka-pti-n-qa...*
and river-GOAL throw-BEN-⇒2-SUB-2P be-IMPV-ADV-3P-TOP
'and when he is about to throw you into the river... (to your detriment, or perhaps to his benefit)'

(Weber 1989: 158)

- d. *kanta-pa*
sing-APPL
'to chant (for deceased)'

(Weber 1989: 160)

e. *miku-pa:ri-shaq*

eat-moment-1FUT

‘I will eat a little (and then be done)’

(Weber 1989: 160)

3.4.2.3 Mosetén

Mosetén makes a distinction between the applicative prefix *ti-* encoding a reason role and the applicative prefix *ti-* encoding an emotion role, illustrated in (105a) and (105b) respectively. It seems to be likely that these two prefixes are historically related somehow, judging from their formal and conceptual similarities. Besides, there are also applicative suffix *-yi*, encoding a benefactive role, and *-tyi*, encoding a theme role, which are illustrated in (105c) and (105d) respectively. Their historical relationships are not certain.

(105) Mosetén (Mosetén-Chon; Bolivia)

a. *yäe ti-fäk-e- ‘ mö’ nanasi’*

1SG APT-angry-VI-3F.O 3F.SG girl

‘I was angry because of the girl.’

(Sakel 2004: 322)

b. *yäe ya’-i-ye-ti-te iits nanatyi’*

1SG buy-VI-APY-REA-3M.O DE.M boy

‘I buy it for the boy (because he has no money or because he is unable to buy it).’

(Sakel 2004: 324)

c. *yäe-rä’ mi-we karij-tye-ya-ksi nöjnöj*

1SG-1R M-DR hard-VD-APY-3P.O.M.S tomorrow

‘I will work for them tomorrow.’

(Sakel 2004: 319)

d. *yäe je-k-tye-te atya jiri-ty camisa*

1SG take-DK-APD-3M.O uncle(M) one-M shirt.E(M)

‘I take a shirt from my uncle.’

(Sakel 2004: 321)

Finally, Mosetén also has the applicative prefix *jaj-* and the applicative suffix *-bi* (Sakel

2004: 323-324), each of which appears to be historically related to none of the other applicative markers in Mosestén. To sum, out of the six Mosestén applicative markers, some are likely to be historically related with each other while others are not.

3.4.2.4 Kolyma Yukaghir

In Kolyma Yukaghir, there are three applicative markers: *-ri*, *-re*, and *-š*. As was mentioned in 3.2.2, the suffixes *-ri* and *-re* could be cognate at least somehow. According to Maslova (1993: 273), the suffix *-š* is originally a causative marker, and its function in the derivation of *ewrê-* ‘to go, to walk’ > *ewre-š-* ‘to lead, to carry’ may be interpreted to be applicative. The suffixes *-ri* and *-re* have a number of commonalities. First, the sets of semantic roles they encode are almost the same: *ri-* encodes locution, emotion, attitude, gesture, and theme (Nagasaki 2003), and *re-* encodes locution, emotion, attitude, gesture (Nagasaki 2003). Also, *-ri* and *-re* share the property that they only can be built on intransitive bases (Maslova 1999). Of course, the phonological similarity is noticeable as well. From these, it is supposed that the two suffixes are possibly historically related. The usage of *-ri* is illustrated in (106a) and (106b). That of *-re* is illustrated in (106c) and (106d).

(106) Kolyma Yukaghir (Yukaghir; East Siberia)

- a. *qan'il met-kele kimda :n'e-ri :-l'el-u-m*
 eagle I-ACC lie-APPL-INFR-O-TR:3SG
 ‘The eagle appears to have lied to me.’

(Maslova 1999: 297)

- b. *tudel met-kele joxon'e-ri:-m*
 3SG 1SG-ACC be_cross-APPL-TR3SG
 ‘He is cross at me.’

(Nagasaki 2003: 17)

- c. *tudel met-kele mada:-re-m*
 3SG 1SG-ACC sit-APPL-TR3SG
 ‘He sat on me.’

(Nagasaki 2003: 17)

- d. *tet kel-l-u-ke tet-kele aja:-re-m*
 [you come-12-0-DS] you-ACC rejoice-APPL-TR3SG
 'He is glad that you have come.'

(Maslova 1999: 527)

Thus, Kolyma Yukaghir applicative markers can be divided into the synchronic and (probably) historical doublet of *-ri* and *-re* and the sole *-š*.

3.4.2.5 Barupu

Barupu has eight applicative markers, the suffixes *-ya* ('above') (106a), *-ke* ('on') (107b), *-ta* ('on') (107c), *-na* (purpose, accompaniment, association) (107d), *-i* (goal, accompaniment) (107e), *-e* (source, malefactive, comparison) (107f), *-o⁽¹⁾* (accompaniment, relational) (107g), and *-o⁽²⁾* (benefactive) (107h) (Donohue 2003). Although I am not quite certain, I consider that *-o⁽¹⁾* and *-o⁽²⁾* could be historically related from their phonological and semantic similarities. The suffixes are illustrated below one by one.

(107) Barupu (Skou; Papua New Guines)

- a. *k-o-vovo-ya-i*

R-3SG.F-circle-above-3PL.M

'She circled above them.'

(Donohue 2003: 122)

- b. *a k-u-ai-ke-ni*

rain R-3SG.F-rain-upon-1SG.F

'It's raining on me.'

(Donohue 2003: 122)

- c. *bio=venavena k-o-ke-ta ai*

woman=witch R-<3SG.F>-sit-on tree

'The witch sat on a log.'

(Donohue 2003: 123)

- d. *biyo k-en-tove-na-re*

cassowary R-1SG.F-walk_around-APPL-3PL.F

'I'm walking around (looking) for cassowaries.'

(Donohue 2003: 123)

- e. *n-e-n-aro-n-i-mu*
IRR-<1SG.F>-descend-1SG-toward-2SG.F
'I'm descending toward you.'

(Donohue 2003: 124)

- f. *n-o-m-aro-m-e-ni*
IRR-<2PL.F>-descend-from-1SG.F
'You're descending away from me.'

(Donohue 2003: 124)

- g. *n-epi-p-aro-p-o-pu*
IRR-<1DU>-descend-with-2PL.M
'We will descend with you (two).'

(Donohue 2003: 124)

- h. *n-ere-r-aro-r-o-mu*
IRR-<3 PL.F>-descend-for-2SG.F
'Those women will descend on your behalf.'

(Donohue 2003: 124)

3.4.2.6 Warembori

In Warembori, the applicative suffixes *-ta* (108a) and *-tane* (108b) are dedicated for direction and source meanings respectively, both of which are spatial, while the other applicative markers, *-na* (108c) and *-una* (108d), commonly can convey the meanings of theme, goal, purpose, and location. From this, I suppose that the former two and the latter two are possibly historically related respectively. In addition, Warembori also has the applicative suffix *-ka* (locative) (108e), which appears to be unrelated with any of its other applicative markers. Each suffix is illustrated below.

(108) Warembori (Lower Mamberamo; Papua)

- a. *manivovi-ti ame-ra-ta Putampai*
friend-PL 1PL.EX-go-APPL Bagusa
'My friend and I went to Bagusa.'

(Donohue 1999a: 36)

- b. *doro-pai-tan-e-o*
rain-affect-APPL-1SG-IND
'I got soaked in the rain.'
(Donohue 1999a: 138)
- c. *make matin-na ipa-yaye*
boy wash-APPL river-DEF
'(The) boy is washing in the river.'
(Donohue 1999a: 11)
- d. *e-to-mena-una bava-ro*
1SG-throw-dog-APPL stone-IND
'I throw stones at dogs.'
(Donohue 1999a: 37)
- e. *dan-ma-ka kamarmandi*
water-exist-APPL bathroom
'There water in the bathroom.'
(Donohue 1999a: 153)

3.4.2.7 Rwanda

Rwanda has the applicative markers, the suffixes *-eesh* (~ *-iish*) (instrumental) (109a), *-an* (manner) (109b)²³, *-ir* (~ *-iz*) (benefactive, recipient) (109c), *-mo* (~ *-ho*) (locative) ((109d) and (109e)), and *-er* (~ *-ir*) (possessive) (109f). The suffixes *-ir* (~ *-iz*) and *-er* (~ *-ir*) are of a common origin from their phonological similarity and from the fact that recipient and possessive roles are considered close in Figure 2 in 3.2.2.

(109) Rwanda (Niger-Congo; Rwanda/DRC)

- a. *úmwáana y-a-nyw-eesh-eje amáta umuhéha*
child he-PST-drink-INSTR-ASP milk straw
'The child drank milk with the straw.'
(Kimenyi 1980: 80)
- b. *umugóre a-rá-vug-an-a agahiinda*
woman she-PRES-say-MANN-ASP sorrow

²³ From (64b) in 2.3.1.2.2 in Chapter 2, it is suggested that *-an*'s meaning may stretch to that of association.

‘The woman is talking with sorrow.’

(Kimenyi 1980: 84)

- c. *múshiki wa Yôhaâni a-ririimb-ir-a amafaraanga gusa*
sister of John she-sing-APPL-ASP money only

‘John’s sister sings for money only.’

(Kimenyi 1980: 87)

- d. *umugóre y-oohere-jé-ho isóko umubooyi*
woman she-send-ASP-to market cook

‘The woman sent the cook to the market.’

(Kimenyi 1980: 89)

- e. *umuhuúngu á-r-úig-ir-á-ho ishuúri imibáre*
boy he-PRES-study-BEN-ASP-at school mathematics

‘The boy is studying mathematics at school.’

(Kimenyi 1980: 92)

- f. *ábáana ba-rá-kubit-ir-a umugabo ímbwa*
children they-PRS-beat-APPL-ASP man dog

‘The children are beating the man’s dog.’

(Kimenyi 1980: 98)

3.4.3 Systems with multiple applicative markers none of which are historically related

There are also multiple-applicative languages in which none of the applicative markers are historically related with any other. In these multiple-applicative languages, all of the applicative markers are so formally or functionally divergent from each other that historical relatedness is difficult to suppose. Three sub-patterns will be distinguished: cases where each applicative marker has a single meaning, cases where some of the applicative markers have multiple meanings, and cases where all of the applicative markers have multiple meanings.

3.4.3.1 Cases in which each applicative marker has a single meaning

Let us start from the cases in which each of the applicative markers has a single meaning. This sub-pattern can be modeled as in Figure 7. This pattern is identified with cases in which a language has multiple sets of the pattern depicted in Figure 3. It is the value of n which determines the degree of the multiplicity.

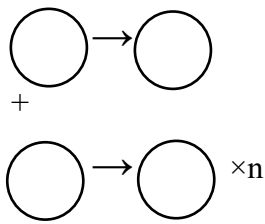


Figure 7. Diachronic change model of a multiple-applicative system (#3) ($n \geq 1$, $n \in$ natural numbers)

Languages in my database that exhibit this pattern are: Rama, Nez Perce, Kashibo-Kakataibo, Shipibo-Konibo, Mosestén, Maricopa, and Chechen-Ingush.

3.4.3.1.1 Nez Perce

Nez Perce has eight applicative markers (Rude 1991), whose forms, meanings, and diachronic sources are exhibited in Table 4. As suggested in Table 4, Rude (1991) provides information for nearly all of the Nez Perce applicative markers with regard to their diachronic origins. According to him, none of the applicative markers has an immediate historical connection with any other. The competition applicative suffix *-o* is the only one whose diachronic origin is uncertain. However, from its form and function, it seems to be at least safe to say that this is also an independent development from all the other applicative markers. Therefore, Nez Perce is judged as falling into this pattern in a relatively neat manner.

Table 4. Nez Perce applicative markers, their meanings, and their diachronic sources (based on Rude 1991)

Applicative suffix	Meaning	Diachronic source
<i>-a'n</i> (~ <i>-aa'n</i>)	benefactive	'eni 'give'
<i>-c'aa</i> (~ <i>-c'a</i>)	locative	<i>c'aak</i> 'hang'
<i>-uu</i> (~ <i>-oo</i>)	directive	copula <i>wee</i> + past morpheme <i>-e</i>
<i>-'aatk</i>	locative	'aat 'go out'
<i>-uukiny</i>	locative	<i>wewkuni</i> 'meet' + past morpheme <i>-e</i>

<i>-aapiik</i>	ablative	<i>saapiik</i> ‘sharpen’ (‘remove’ earlier)
<i>-tiween</i> (~ <i>-twe</i>)	associative	survives in the compound <i>tiwiikin</i> ‘accompany, follow’
<i>-o’</i> (~ <i>-so’</i>)	competitor	(unknown)

3.4.3.1.2 Kashibo Kakataibo

Kashibo-Kakataibo has three applicative markers, the suffixes *-kin* (comitative) (110a), *-xun* (benefactive) (110b), and *-anan* (~ *-naan*) (malefactive) (110c). Every has a single meaning and seems to have an independent origin.

(110) Kashibo-Kakataibo (Panoan; Peru)

- a. *‘ën kana bata Maria Juan*
‘ë=n kana bata Maria Juan
 1SG=A NAR.1SG candy.ABS Maria.ABS Juan.ABS
‘inankinti ‘ain
‘inan-kin-ti ‘ain
 give-ASSOC-NOM be.1/2PL

‘I will give candy to Maria with Juan.’ / ‘I will give candy to Juan with Maria.’

(Zariquiey Biondi 2018: 682)

- b. *‘ën kana bata Maria Juan*
‘ë=n kana bata Maria Juan
 1SG=A NAR.1SG candy.ABS Maria.ABS Juan.ABS
‘inanxunti ‘ain
‘inan-xun-ti ‘ain
 give-BEN-NOM be.1/2PL

‘I will give candy to Maria for Juan’s benefit.’

‘I will give candy to Juan for Maria’s benefit.’

(Zariquiey Biondi 2018: 681)

- c. *Juanën ka Marianën tuá unënaanxa*
Juan=n ka Maria=n tuá unën-anan-a-x-a
 Juan=ERG NAR.3PL Maria=GEN son.ABS hide-MAL-PERF-3PL-NPROX

‘Juan hid Maria’s son to her detriment.’

(Zariquiey Biondi 2018: 685)

3.4.3.1.3 Shipibo-Konibo

Shipibo-Konibo, a cognate language with Kashibo-Kakataibo, has three applicative markers, the suffixes *-xon* (benefactive, malefactive) (111a), *-naan* (malefactive) (111c), and *-kin* (associative) (111d). Note that, as was discussed in 3.2.2, benefactive and malefactive are grouped together, based on which *-xon* is judged as a single-meaning applicative marker like *-naan* and *-kin*.

(111) Shipibo-Konibo (Panoan; Peru/Brazil)

- a. *nokon bake-n-ra e-a kinan-xon-ke*
POS1 child-ERG-EV 1-ABS vomit-xon-CMPL

‘My child vomited (to my benefit/detriment).’

(Valenzuela 2010: 111)

- b. *mi-n-ra e-a i-kas-ai bewa-ribi mi-n-pari*
2-ERG-EV 1-ABS do.I-DES-PP1 song:ABS-also 2-ERG-first
e-a bewa-naan-ke
1-ABS sing-MAL-CMPL

‘You sang first the same song I wanted to sing (to my detriment).’

(Valenzuela 2010: 117)

- c. *jawen baba-n-ra jawen yoxan*
POS3 granddaughter-ERG-EV POS3 old.woman:ABS
pashkin-ke-tian yaká-kin-ke
be.tired-P-DS sit-ASSOC-CMPL

‘Since her grandmother was tired, the granddaughter sits with her.’

(Valenzuela 2010: 127)

3.4.3.1.4 Chechen-Ingush

In Chechen-Ingush, every applicative marker (the prefixes *chy-* ‘in’ (112a), *t’a-* ‘on’ (112b), *k’al-* ‘under’ (112c), and *dehwa-* ‘across’ (112d)) has a single meaning and is historically independent from each other in that every emerged from its homophonous postposition counterpart (as will be discussed in 4.3.2), and even the postpositions do not seem to be related with each other:

(112) Chechen-Ingush (Northeast Caucasian; North Caucasus)

a. *cysjk jaashkjaa=chy chy-qussa-dalar*

cat box=in in-jump-D.

‘The cat jumped into the box.’

(Nichols 2011: 414)

b. *cysjk istuolaa=t’y wa=t’y-qossa-dalar*

cat table.DAT=on down=on-jump-D.INCP.WP

‘The cat jumped (down) onto the table (from someplace above).’

(Nichols 2011: 414)

c. *cyskj Istuolaa k’al-iiqqar*

cat table.DAT under-run.WP

‘The cat ran under the table.’

(Nichols 2011: 411)

d. *jett bettaa dwa-dehwa-iiqqar*

cow moon.DAT DX-across-jump.WP

‘The cow jumped over the moon.’

(Nichols 2011: 412)

3.4.3.1.5 Maricopa

Maricopa has four applicative markers with single meanings, the prefixes *ily-* (locative) (113a), *k-* (locative) (113b), *nym-* (associative) (113c), and the suffix *-y* (benefactive) (113d). According to Gordon (1986), *ily-*, *k-*, and *nym-* are related with the postpositions (*i*)*ly*, *k*, and (*ny*)*m* respectively, and *-y* seems to have a separate origin from its suffixal status and meaning.

(113) Maricopa (Yuman-Cochimí; Arizona)

a. *tdish mat ily-k-shvaw-k*

corn earth in-IMP-put-REAL

‘Plant the corn in the ground.’

(Gordon 1986: 50)

b. *Heather-sh va-ny-a k-dii-k*

Heather-SJ house-DEM-VAUX LOC-come-REAL

‘Heather came from the house.’

(Gordon 1986: 50)

c. *nym-chkyew-k*

DEM+ASC-bite-REAL

‘He bit with it.’

(Gordon 1986: 80)

d. ‘-nchen-sh ny-tray-k

1-old=sib-SJ 3/1-light=fire+BEN-REAL

‘My older brother lit a fire for me.’

(Gordon 1986: 85)

3.4.3.2 Cases in which some or all of the applicative markers have multiple meanings

Just as the applicative marker in a single-applicative language can have multiple meanings, the applicative markers in a multiple-applicative language can have multiple meanings. In the cases it does, it is possible either that only a part of the applicative markers have multiple meanings or that all of the applicative markers do. I detected that the following 15 languages in my sample fall into the former pattern: Javanese, Amharic, Creek, Tukang Besi, Ainu, Katukina-Kanamari, Central Alaskan Yupik, Kipsigis, Kogi, Swahili, Dholuo, Georgian, Dakota, Rama, and Winnebago and detected that the following 3 languages in my sample falls into the latter pattern: Wolof, Taba, and Maasai. Of course, the presupposition is that the applicative markers in each of these languages are not historically related with each other; in each case, I am not aware of any information on historical relatedness between the applicative markers in question, and it seems that, if a historical relationship exists at all between them, it will have a rather long distance. In what follows, these will be discussed in turn. When information is available about the historical origin of an applicative marker, it will be mentioned.

3.4.3.2.1 Cases in which some of the applicative markers have multiple meanings

The diachronic model for this pattern is shown in Figure 8 below. This pattern can be seen as a combination of the patterns depicted in Figure 2 and Figure 3.

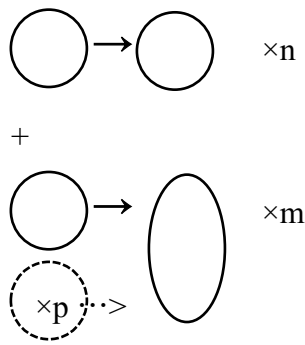


Figure 8. Diachronic change model of a multiple-applicative system (#4) ($n \geq 1$, $m \geq 1$, $n, m \in \text{natural numbers}$)

Languages in my database that fall under this pattern are: Javanese, Amharic, Creek, Tukang Besi, Ainu, Katukina-Kanamari, Central Alaskan Yupik, Kipsigis, Kogi, Swahili, and Georgian. Two languages out of these: Javanese and Dakota, will be discussed with specific examples. After that, the other languages will be only briefly mentioned. It should be noted that the scenarios that will be presented here are not more than one of possibilities, and, although supposed to be somewhat likely, they are never confirmed ones.

Javanese has two applicative markers: the suffix *-i* and the suffix *-ake*. (Sofwan 2010; Nurhayani 2012; Hemmings 2013). The suffix *-i* encodes location (114a) and recipient (114b), which are grouped together as a spatial domain in Figure 2 and (93). The applicative suffix *-ake* can express a wider range of meanings, which are: benefactive (114c), instrumental (114d), and theme (114e). Thus, *-i* is a single-meaning applicative marker, and *-ake* is a multiple-meaning applicative marker.

(114) Javanese (Malayo-Polynesian; Java)

- a. *pelem nyeblok-i gentèng ómah-ku*
 mango (A) AV.fall-APPL roof (O) house-1SG.POSS
 ‘a mango fell on the roof of my house.’

(Hemmings 2013: 168)

- b. *dheweke m(w)-eneh-i aku gawean kuwi*

he ACTIVE-give-APPL me job that
 ‘He gave me that job.’

(Nurhayani 2012: 5)

c. *aku masak-aké Karolina jajan*
 1SG (A) AV.cook-APPL Karolina (O) cake
 ‘I baked Karolina a cake.’

(Hemmings 2013: 168)

d. *Ani n-(t)uthuk-ake palu neng tembok*
 Ani ACTIVE-hit-APPL hammer on wall
 ‘Ani hit a hammer to the wall.’

(Nurhayani 2012: 4)

e. *dheweke m-(w)eneh-ake gawean kuwi marang aku*
 he ACTIVE-give-APPL job that to me
 ‘He gave that job to me.’

(Nurhayani 2012: 5)

Dakota (Riggs 2016 [1852]; Adam 2019 [1878]) has five applicative markers, the prefixes *ki-* (~ *kic’i-*) (addressee, possessive), *a-* (‘on’), *e-* (‘at’), *o-* (‘in’), and *i-* (‘with, for, on account of’), and Riggs (2016 [1852]) suggests that *ki-* (~ *kic’i-*), *a-*, *e-*, and *o-* originate from the postpositions *kici*, *akan*, *ekta*, and *ohna* respectively, and *i-* from the verbal prefix *ici-* ‘together’, meaning that every applicative marker is historically not related with any other (for more details, see 4.3.1.1 in Chapter 4). The prefix *ki-* (~ *kic’i-*) is judged as a single-meaning applicative marker in that the addressee and possessive roles are grouped together in (93), and the prefix *i-* is judged as a multiple-meaning applicative marker in that the companion and purpose roles are separated in (93).

(115) Dakota (Siouan; North Dakota/South Dakota)

a. *sunka kici-kte*
 dog for-him.he.killed
 ‘He killed the dog for him.’

(Adam 2019 [1878]: 21)

b. *mini pa a-makas’taŋ*

water head on-me.poured
'He poured water on my head.'

(Riggs 2016 [1852]: 48; Adam 2019 [1878]: 24)

c. *yuhpa* d. *eyuhpa*
to lay down to lay down at

(Riggs 2016 [1852]: 39; Adam 2019 [1878]: 24)

e. *c'aŋku kiŋ o-mani*
road the in-walks
'He walks in the road.'

(Riggs 2016 [1852]: 48)

f. *c'ekiya* g. *ic'ekiya*
to pray to pray for/with

(Riggs 2016 [1852]: 39; Adam 2019 [1878]: 24)

Winnebago (Lipkind 1945; Craig & Hale 1988) has four applicative markers, the prefixes *ho-* (inessive), *ha-* (supraessive), *hi-* (instrumental), and *gi-* (benefactive, possessive). The prefix *gi-* is said to come from the adverb-postposition *e'gi* (Lipkind 1945: 52). The origins of the other prefixes are unknown.

Dholuo has two applicative markers: the suffixes *-n* and *-e* (e.g., Odero et al. 2017). According to Odero et al. (2017), *-n* expresses the meanings of 'on behalf of' 'towards' 'with regard to' and *-e* expresses the meaning of 'a place where an action takes place'. And I suppose that their respective diachronic origins are their semantically compatible prepositions *ni* and *e*, about which I will discuss in more detail in 4.3.2 in Chapter 4.

Georgian has three applicative markers, the prefixes *i-* (~ *u-*) (benefactive, recipient), *e-* (benefactive, locative), and *a-* (locative) (e.g., Yasugi 2012). The applicative suffix *a-* comes from *ay* = 'up' in Old Georgian (Harris & Campbell 1995: 95), which in turn comes from an independent adverb (Harris 2003: 65).

According to Miyaoka (2012: 108-111), in Central Alaskan Yupik, *-(u)te* means 'to, for, with, together, reciprocally', *-(g)i* malefactive, *-(u)teke* 'on account of, concerning', and *-(u)cite* 'in place of, instead of'.

In Creek, the prefix *im-* is a multiple-meaning applicative marker that can express benefactive, malefactive, goal, source, and possessor, while the other applicative marker *is-* is a dedicated instrumental applicative prefix (Martin 2011). The prefix *is-* is said to

be related with the verb the verb *is* (Booker 1980) or *is-íta* (Martin 2000: 392) ‘to take, hold’, and seems to have a different origin from the prefix *im-*.

In Amharic, the suffix *-bb* is a multiple-meaning applicative marker that can express instrument, malefactive, and locative, while the other applicative marker *-ll* is a dedicated benefactive suffix (Amberber 2000). The suffixes *-bb* and *-ll* are supposedly related with the prepositions *be-* and *le-* respectively.

In *Tukang Besi* (Donohue 1999b), the applicative suffix *-ngkene* is a dedicated comitative marker, while the other applicative markers *-ako* and *-(V)(C)i* have quite versatile meanings. As far as considered from Donohue (1999b), the three suffixes seem to have different origins from each other.

In *Ainu* (e.g., Bugaeva 2010), the major two applicative markers, the prefixes *e-* and *ko-*, have versatile meanings, while the other applicative marker, the prefix *o-*, only has location and goal meanings. The three prefixes have different origins from each other (Bugaeva 2010).

In *Katukina-Kanamari* (Queixalós 2010), the applicative prefixes *katu-*, *ama-*, and *to-* are dedicated for addressee, benefactive, and addressee meanings respectively, while the other applicative marker *o-* may express the meanings of benefactive, malefactive, and possessive. The prefixes *katu-*, *ama-*, and *to-* derive from their respective postposition counterparts (Queixalós 2010; 2014; personal communication, 2021), and the prefix *o-* derives from a pronoun.

In *Kipsigis* (Bii et al. 2014), the applicative suffixes *-w*, *-chi*, and *-y* are dedicated for benefactive, benefactive, and directional meanings respectively, while the other applicative marker, the suffix *-en*, may express the meanings of ‘with’, ‘from’, ‘to’, ‘on’, ‘for’, ‘in’, ‘over’, and ‘of’.

In *Swahili* (Liu 2014), the applicative suffix *-i* (~ *-e*) may encode benefactive, goal, instrumental, and locative roles, thereby characterized as a multiple-meaning applicative marker. On the other hand, there is a recent development of the instrumental applicative suffix *-iish* out of the causative suffix *-iish* (which I suppose might be related with the *Rwanda* instrumental applicative suffix *-eesh* (~ *-iish*)), which is likely to be a single-meaning applicative marker.

In *Kogi*, according to Knuchel (2020), the applicative prefixes *a-* and *u-* are dedicated for benefactive and comitative meanings respectively, while the other

applicative marker, the prefix *i-*, may express the meanings of locative, goal, source, malefactive, and theme.

Rama has five applicative markers, the prefixes *ba-*, *yu-* (*y-u-*), *k(a)-*, *su-*, *yaa-* (*y-a-*) (Craig & Hale 1988; Craig 1990); historical relationships between Rama postpositions and applicative markers are shown in Table 5, cited from Craig & Hale (1988: 320):

Table 5. Rama postpositions and relational preverbs (Craig & Hale 1988: 320)

Postpositions	Relational preverbs
<i>bang</i> ‘goal, purpose’	<i>ba-</i>
<i>u</i> ‘associative, instrumental’	<i>yu-</i> (<i>y-u</i>)
<i>kang</i> ‘ablative, source’	<i>k(a)-</i>
<i>su</i> ‘locative’	<i>su-</i>
<i>aak</i> ‘dative’	<i>yaa-</i> (<i>y-a-</i>)
<i>ki</i> ‘locative’	
<i>kama</i> ‘beneficiary’	
<i>king</i> ‘beneficiary’	
<i>aing</i> ‘genitive’	

3.4.3.2.2 Cases in which all of the applicative markers have multiple meanings

The last pattern is systems with multiple applicative markers each of which has multiple meanings. The diachronic model of this is shown in Figure 9 below. This pattern can be seen as cases in which a language has multiple sets of the pattern depicted in Figure 4. It is the value of *n* which determines the degree of the multiplicity of the applicative markers.

In my database, only Taba, Wolof, and Maasai fall under this pattern. These will be discussed in turn in what follows.

The Taba applicative suffix *-(V)k* can express instrument, benefactive, and theme meanings, illustrated in (116a), (116b), and (116c), respectively. The other Taba applicative marker, the suffix *-o*, in turn, can express location, theme, source, and benefactive meanings, illustrated in (116d), (116e), (116f), and (116g), respectively. Thus, both suffixes can safely be regarded as multiple-meaning applicative markers.

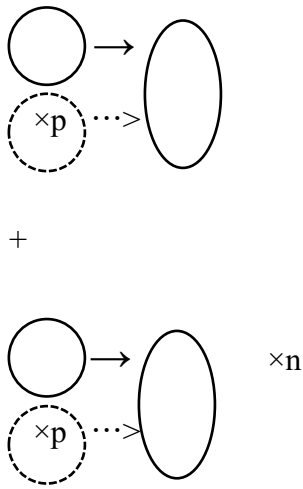


Figure 9. Diachronic change model of a multiple-applicative system (#5) ($n \geq 1$, $n \in$ natural numbers)

(116) Taba (Malayo-Polynesian; Indonesia)

- a. *Ahmad Npunak kolay peda*
Ahmad n=pun-ak kolay peda
 Ahmad 3SG=kill-APPL snake machete
 ‘Ahmed killed the snake with a machete.’

(Bowden 1997: 236)

- b. *Banda notik yak yan*
Banda n=ot-ik yak yan
 Banda 3SG=catch-APPL 1SG fish
 ‘Banda gave me some fish.’

(Bowden 1997: 242)

- c. *namliak tit*
n=amlih-ak tit
 3SG=laugh-APPL 1PL.INCL
 ‘She’ll laugh at us.’

(Bowden 1997: 238)

- d. *nbattalono kurusi*

n=battalon-o kurusi
 3SG=sit-APPL chair
 ‘He’s sitting on the chair.’

(Bowden 1997: 245)

e. *nayoko ni dawalat*
n=ha-yok-o ni dawalat
 3SG=CAUS-cry-APPL 3SG.POSS girlfriend
 ‘He’s crying over his girlfriend.’

(Bowden 1997: 248)

f. *Rauf nyolo wola ai coatco*
Rauf n=yol-o wola ai coat=so
 Rauf 3SG=take-APPL rope wood CLASS=one
 ‘Rauf took the rope from the bundle of fire-wood.’

(Bowden 1997: 249)

g. *ntopo John ngnge*
n=top-o John ngnge
 3SG=crack-APPL John canarium_nut
 ‘He’s cracking canarium nuts for John.’

(Bowden 1997: 377)

The Wolof applicative suffix *-al*, as illustrated in (117a) and (117b), may express benefactive, recipient, and comitative meanings. The suffix thus can be seen as a multiple-meaning applicative marker. The other Wolof applicative marker, the suffix *-e*, is also a multiple-meaning applicative marker, and is illustrated in (117c). The fact that (117c) has three possible readings indicates how *-e* covers instrumental, location, and manner meanings, suggesting how semantic extensions would have happened.

(117) Wolof (Niger-Congo; Gambia/Senegar)

a. *Móodu la Faatu wax-al*
 Móodu FOC.3 Faatu talk.to-APPL
 ‘Faatu talked to MÓODU.’

(Dione 2013: 4)

- b. *Faatu togg-al Móodu jen wi*
 Faatu cook-APPL Móodu fish the
 ‘Faatu cooked the fish for Móodu.’

(Dione 2013: 4)

- c. *Faatu togg-e jën wi diw/ci waañ wi/nii*
 Faatu cook-APPL fish the oil/in kitchen the/MAN.ADV
 ‘Faatu cooked the fish with oil/in the kitchen/in this way.’

(Dione 2013: 6)

Maasai has three applicative markers (Lamoureaux 2004). The applicative suffix *-aki* (~ *-oki*) encodes goal (118a) and benefactive (118b) roles. The applicative suffix *-ie* encodes instrumental ((118c), (118e)), locative ((118d), (118e)), and associative (118f) roles. (118e), showing the interface between instrumental and locative meanings, precisely suggests how this suffix could have come to have both meanings. The applicative suffix *-ore* encodes instrumental (118g) and associative (118h) roles.

(118) Maasai (Nilo-Saharan; Kenya/Tanzania)

- a. *k-á-i^durr-áki Nairóbi*
 D-1SG-move-DAT Nairobi.ACC
 ‘I will move to Nairobi.’

(Lamoureaux 2004: 35)

- b. *ε-yi^ér-áki en-kítok en-dáà ol-payián*
 3-cook-DAT F.SG-woman.NOM F.SG -food.ACC M.SG-man.ACC
 ‘The woman will cook for the man.’

(Lamoureaux 2004: 36)

- c. *á-i^ηát-íé enâ gárri^*
 1SG-flee-INST this.F.ACC car.ACC
 ‘I will flee with the car.’

(Lamoureaux 2004: 70)

- d. *á-bík-íé Náirɔ̀bì*
 1SG-stay-INST Nairobi.NOM
 ‘I will stay in Nairobi.’

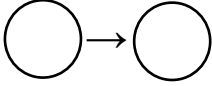
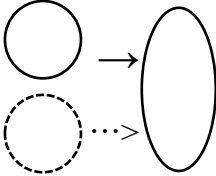
(Lamoureaux 2004: 70)

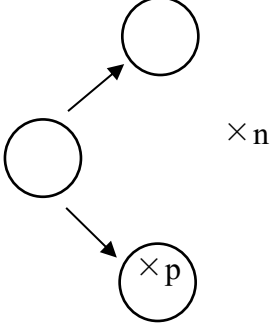
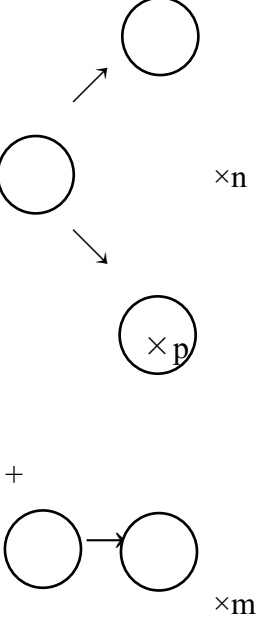
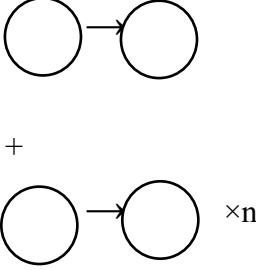
- e. *é-i^su^j-íé* *en-kítok* *in-kiláni* *o-réyiet*
 3-wash-INST F.SG-woman.NOM F.PL-clothes.ACC M.SG -river.NOM
 ‘The woman is washing the clothes in the river.’
 ‘The woman is using the river to wash clothes.’
 (Lamoureux 2004: 71)
- f. *e-irɔ'(r)-íé* *iyióók*
 3-talk-INST we.ACC
 ‘She talks to/with us.’
 (Lamoureux 2004: 71)
- g. *é-su^j-áré* *en-kí^téh* *e-ɲúdí*
 3-follow-INST.MID F.SG-cow.ACC F.SG-stick.NOM
 ‘The cow is followed with the stick.’
 (Lamoureux 2004: 68)
- h. *áa-ta-dál-àrè*
 3>1SG-PF-play-INST.MID
 ‘He will play with me.’
 (Lamoureux 2004: 72)

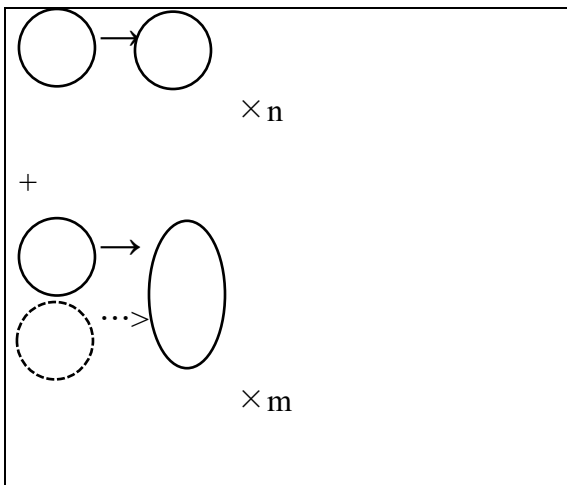
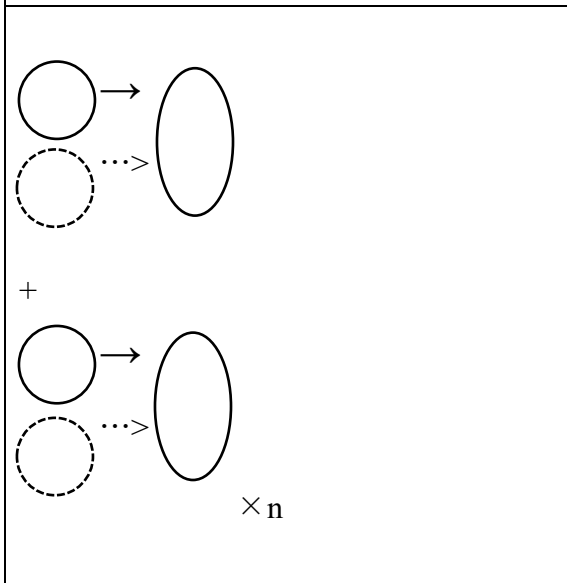
3.5. Summary and discussion

Integrating the models presented so far, the complete picture shown in Table 6 is gained:

Table 6. Models of developments of systems of applicative markers in particular languages

Model	Languages
 <p>(Figure 3)</p>	<p>K'iche' Southeastern Tepehuan (total: 2)</p>
 <p>(Figure 4)</p>	<p>Thulung Rai Koyra Chiini K'iche' Hualapai Rawang Kope Kalkatungu rGyalrong Kambera Tariana Motuna Yucatec Maya Ngangyiemerri Bantik Herero Southeastern Tepehuan Mbuun Tandroy Nahuatl (total: 17)</p>

 <p>(Figure 5)</p>	<p>Warrongo (n=1 (p=1)) (total: 1)</p>
 <p>(Figure 6)</p>	<p>Southern Sierra Miwok (n=1 (p=1), m=2) Huallaga Quechua (n=1 (p=3), m=1) Mosetén (n=1 (p=1), m=4) Kolyma Yukaghir (n=1 (p=1), m=1) (including multiple-meaning cases) Barupu (n=1 (p=1), m=6) Warembori (n=2 (p=1), m=1) (including multiple-meaning cases) Rwanda (n=1 (p=1), m=3) (including multiple-meaning cases) (total: 7)</p>
 <p>(Figure 7)</p>	<p>Nez Perce (n=7) Kashibo-Kakataibo (n=2) Shipibo-Konibo (n=2) Maricopa (n=3) Chechen-Ingush (n=3) (total: 5)</p>
	<p>Winnebago (n=3, m=1) Javanese (n=1, m=1)</p>

 <p>(Figure 8)</p>	<p>Amharic (n=1, m=1) Creek (n=1, m=1) Georgian (n=1, m=2) Tukang Besi (n=1, m=2) Ainu (n=1, m=2) Katukina-Kanamari (n=2, m=1) Central Alaskan Yupik (n=4, m=1) Kipsigis (n=3, m=1) Kogi (n=2, m=1) Swahili (n=1, m=1) Dholuo (n=1, m=1) Dakota (n=4, m=1) Rama (n=3, m=2) (total: 14)</p>
 <p>(Figure 9)</p>	<p>Taba (n=1) Wolof (n=1) Maasai (n=2) (total: 3)</p>

A notable observation is gained in terms of applicative markers whose diachronic sources are adpositions. Let us examine how many applicative markers whose diachronic sources are adpositions are involved in each of the single-applicative languages and multiple-applicative languages. First, out of the 19 single-applicative languages, only Koyra-Chiini and Yucatec Maya have possibility that their applicative markers (the suffixes *-nda* and *-t* respectively) derive from adpositions (see 4.3 for discussion of these hypotheses). Second, out of the 31 multiple-applicative languages, 11 languages, which are Dakota, Maricopa, Rama, Katukina-Kanamari, Chechen-Ingush, Ainu, Warembori, Tukang Besi, Amharic, Rwanda, and Dholuo, have applicative markers which can date back to adpositions (see Chapter 4 for detailed discussion of these hypotheses). A further observation is that many of those multiple-applicative languages with an applicative marker whose diachronic source can be an adposition have more than one such applicative markers rather than just one. To integrate these facts, a generalization is suggested that, if a language has an applicative marker coming from an adposition, there will be more applicative markers that come from an adposition in that language: diachronically speaking, if a language grammaticalize an adposition into an applicative marker, then it tends to grammaticalize more adpositions into applicative markers.

In this chapter, I showed how different patterns are distinguishable with regard to how a system of applicative markers in a language developed (develops), from the following three perspectives: the number of applicative markers, historical relatedness between applicative markers, and generalness of the semantics of the applicative markers. Although, as mentioned in 3.1, the sum of the resulting models is based on my sample languages, is not a comprehensive version that encompasses every logically possible pattern, and some finer distinctions were not attempted, it serves as a framework for uniformly capturing how each applicative system of my sample languages could have developed diachronically. Also, if languages are found or are taken into account that have a pattern not depicted in Table 6 in future studies, the whole model will come closer to comprehensiveness.

The resulting diachronic models themselves and the observation made above about the relationship between adpositional origins and the number of applicative markers are supposed to be combined with the results of following chapters that deal with different

aspects of the same sample languages in order to understand the diachronic typology of applicatives in a broader perspective.

4 Diachronic typology of applicative marker types

The present chapter focuses on the parameter of “applicative marker types”. The basic idea in this chapter is that, in light of general tendency in grammaticalization, applicative markers of certain marker types tend to commonly trace back to certain types of diachronic sources. Demonstrating this idea by data from my sample languages, I will show that applicative prefixes tend to come from postpositions, and applicative suffixes tend to come from prepositions or verbs. This correspondence may translate to a correlation between applicative marker types and word order patterns. Thus, in this chapter, I will ultimately aim to establish this correlation and claim that the correlation stems from the way in which each type of applicative markers is likely to develop, an attempt that has never been done previously.

The organization of the present chapter is as follows. Section 4.1 introduces possible marker types for applicative markers. Section 4.2 provides some theoretical background for the diachrony of verbal affixes in general. Section 4.3 discusses and illustrates how the processes whereby adpositions grammaticalize into applicative markers can be justified. Section 4.4 shows a result of classification of all of the sample languages according to which types of applicative markers they have, together with word order patterns in each language, and proposes a correlation between applicative marker types and word order patterns. Section 4.5 discusses how the processes whereby verbs grammaticalize into applicative markers can contribute to explaining the correlation. Section 4.6 provides a summary of all of the diachronic links discussed. Section 4.7 exhibits a conclusion.

4.1 Overview of applicative marker types

The applicative marker used in the Wolof applicative construction (2b) in 1.1 in Chapter 1, repeated here, is a suffix:

(119) Wolof (Niger-Congo; Senegal/Gambia/Mauritania)

<i>mungi</i>	<i>lekk-e</i>	<i>kuddu</i>
PRES.3SG	eat-APPL	spoon

‘He is eating with a spoon.’

(Comrie 1985: 318)

There are other applicative marker types attested²⁴. Among them is prefix²⁵. An illustration is given below from Winnebago:

(120) Winnebago (Siouan; Midwestern United States)

kook-ra ho-nanzhin-je-enan

box-DEF INESSIVE-stand-AUX-DECL

‘It is standing in the box.’

(Craig & Hale 1988: 314, 328)

The third type is circumfix. Nishimoto (2018: 88-90) suggests that Tandroy has an applicative circumfix: *añ- -a* (~ *a- -añe, i- -a, i- -añe*). Its usage is illustrated in (121) below, in which *marare reo* ‘sick people’ is an applied argument which has a beneficiary role²⁶:

(121) Tandroy (Malayo-Polynesian; Southern Madagascar)

ipaiañe vare marare reo

look_for.APPL rice sick_person PL

‘(Somebody) looks for rice for sick people.’

(Nishimoto 2018: 80)

4.2 A theoretical background for the diachrony of verbal affixes

The problem of whether an applicative affix is a prefix or suffix is reduced to a problem of morpheme order. The major principle adopted in diachronic studies of the morpheme order is that the position of an affix with regard to the verbal root has a stable

²⁴ Some applicative markers could be analyzed as clitics (as in Rama (Craig & Hale 1988)). However, the present study focuses on the prefix vs. suffix distinction rather than the affix vs. clitic distinction.

²⁵ There are occasions in which applicative prefixes are labelled “preverbs” on account of their comparability with Indo-European preverbs. For applicative-like properties of Indo-European preverbs, see Nam (2017) and Zanchi (2019).

²⁶ Dixon (2012: 314-315) discusses a language which has an applicative circumfix and which is not included in my sample: Misanla Totonac (Totonacan; Mexico), based on Mackay (1999).

tendency to reflect the erstwhile position of its source independent word with regard to the verb. In historical approaches to languages, this idea emerged from the observation that affixes develop through syntagmaticization or morphologization of independent words as a result of the independent words being frequently placed (sometimes immediately) before or after elements of a certain word class. And the idea was developed and practiced in a lot of works in diachronic typology including Givón (1971; 2015), Comrie (1980), Bybee (1988), Bybee et al. (1990), Siewierska (2010) and Mithun (2011; 2017). In what follows, it will be shown how this principle is manifested in the way applicative markers develop from adpositions.

4.3 Diachronic links between adpositions and applicative affixes

Garrett (1990), Baker (1996: 431-432), Creissels (2006: 79), Peterson (2007: 125-129), and Zúñiga & Kittilä (2019: 222-223) discuss that adpositions can be diachronic sources of applicative markers. However, they do not discuss in detail in what mechanisms it is realized or how results are different between postposition source cases and preposition source cases, part of which I will attempt in what follows.

Consider the following Rama example. According to Craig & Hale (1988), the postposition *ka* as appearing in (122a) is the diachronic source of the applicative prefix *ka-* as appearing in (122b).

(122) Rama (Chibchan; Nicaragua)

- a. *naing taata ka na-ngalbi-u*
 my father PSP/from 1-run-TNS
 ‘I ran away from my father.’

(Craig 1990: 127)

- b. *ka-na-ngalbi-u*
 RP/from-1-run-TNS
 ‘I ran away from him.’

(Craig 1990: 127,132)

Likewise, although it is not confirmed in literature, in Warembori, the applicative suffix *-na* (123b) appears to originate from the preposition *nana* (123a)’s attaching to the preceding verb and reducing its own form.

(123) Warembori (Lower Mamberamo; Indonesia)

- a. *e-na nana e-me-ro*
1SG-eat OBL 1SG-house-IND
'I ate in my house.'

(Donohue 1999: 17)

- b. *e-na-na e-me-ro*
1SG-eat-APPL 1SG-house-IND
'I ate in my house.'

(Donohue 1999: 17)

Generalization of the similar kind of grammatical change is justified in the following way.

It should be noted that Dryer (1992: 92-93) discusses a strong correlation between VERB AND ADPOSITIONAL PHRASE order whereby, in overwhelming cases, OV order co-occurs with PP-V order (see also Baker 1996: 432) and VO order co-occurs with V-PP order. Also, in many cases, OV order co-occurs with postpositions and VO with prepositions (Greenberg 1963: 45; Dryer 1992: 83; 2013; 2019: 65-66). Integrating these universals lead to the assumption that, generally, postpositions are placed before the verb so their governed terms do not intervene between them and the verb, and prepositions are placed after the verb so their governed terms do not intervene between them and the verb. Considering finally the fact that adposition is a closed class, and its limited members are used with a wide variety of verbs, it can be postulated that postpositions and prepositions are possible origins of applicative prefixes and applicative suffixes respectively. To sum up, the generalization (124) is gained:

(124) Adpositional origins of applicative affixes

The original identity of an applicative prefix is a word which used to frequently come (possibly immediately) before the verb. Postposition can fulfill this role in OV (and exceptional VO) languages.

The original identity of an applicative suffix is a word which used to frequently come (possibly immediately) after the verb. Preposition can fulfill this role in VO (and exceptional OV) languages.

Of course, it is not always the case that an adposition heading an adpositional phrase modifying a verb and the verb are immediately adjacent but some intervening elements like adverbs, other grammatical arguments, or any inflectional morpheme may be present between them. For example, in (125), the NP *šiekar* ‘sugar’ intervenes the preceding postposition *ču* ‘in’ and the verb *tasan* ‘sprinkle’ in the final position:

(125) Chechen-Ingush (Northeast Caucasian; North Caucasus)

- a. *čaj-na ču šiekar tasan*
 tea-DAT in sugar sprinkle
 ‘Put sugar in tea.’

(Nichols 1984: 193)

In a similar vein, in (126), the NP *te bambai* ‘a comb’ is placed between the predicative complex *no-balu* in the initial position and the prepositional phrase headed by the benefactive preposition *ako*.

(126) *Tukang Besi* (Malayo-Polynesian; Indonesia)

- a. *no-balu te bambai ako te porai-no*
 3REAL.S-buy CORE comb BEN CORE fiancée-3GEN
 ‘He bought a comb for his fiancée.’

(Donohue 2001: 221)

Nevertheless, it is confirmed that these postposition and preposition have developed applicative suffix and applicative prefix respectively, as in (127) and (128):

(127) Chechen-Ingush (Northeast Caucasian; North Caucasus)

- b. *šiekar čaj-na ču-tasan*
 sugar-NOM tea-DAT in-sprinkle
 ‘Put sugar in tea.’

(Nichols 1984: 193)

(128) *Tukang Besi* (Malayo-Polynesian; Indonesia)

- no-balu-ako te porai-no te bambai*
 3REAL.S-buy-APPL CORE fiancée-3GEN CORE comb

‘He bought a comb for his fiancée.’

(Donohue 2001: 221)

Why the grammaticalization happens despite such intervention could be explained as follows. If a speaker of a predominantly postpositional language conceives that a postposition heading a postpositional phrase modifying a verb only has to come before the verb, using the “postposition” as if it is a prefix to the verb satisfies that demand. In that process, it does not matter if there happens to be any constituent between the postposition and the verb; if the speaker wants to morphologize the postposition to the verb despite the presence of such an intervening constituent, it suffices to place the constituent outside of the resulting prefixed verb. The same applies to the cases of predominantly prepositional languages. Another possibility is, as speculative it is, that, in a previous period, the word order rule did not allow it to place a core NP between an adposition and the verb, when the applicative marker arose by the adposition’s attaching to its adjacent verbs.

Diachronic phenomena in consistent with this theoretical background are observable in some more of my sample languages, including both cases in which applicative prefixes developed from postpositions and in which applicative suffixes developed from prepositions. These examples will be discussed below.

4.3.1 Applicative prefixes from postpositions

Applicative prefixes originating in postpositions seem to be existent in at least 7 languages in my language sample, 4 out of which are from the Americas. These will be illustrated below in turn.

4.3.1.1 Dakota

Riggs (2016 [1852¹]: 17,39) and Adam (2019 [1878]: 20,24) mention that the Dakota applicative prefixes *ki-* (~ *kic’i-*), *a-*, *e-*, and *o-* probably come from the postpositions *kic’i*, *akan*, *ekta*, and *ohna* respectively²⁷. The usage of the applicative prefix *ki-* (~ *kic’i-*) and

²⁷ I am not able to judge how plausible these scenarios actually are, with the formal differences, but I consider at least the relationship between the postposition *kic’i* and the applicative *kic’i-* quite valid. Also, the remaining applicative marker, the prefix *ic-*, originates from the adverb *ici* ‘together’ (Adam 2019

the postposition *kic'i* is illustrated below:

(129) Dakota (Siouan; North Dakota/South Dakota)

- a. *he kic'i mde kta*
him with I.go FUT
'I will go with him.'

(Riggs 2016 [1852]: 60)

- b. *wowapi kic'i-caga*
writing for-him.he.made
'He wrote a letter for him.'

(Riggs 2016 [1852]: 17)

- c. *wowapi ki-caga*
writing to-him.he.made
'He wrote him a letter.'

(Riggs 2016 [1852]: 17)

4.3.1.2 Winnebago

I suppose that, in Winnebago, the adverb/postposition *e'gi* 'here, in' mentioned in Lipkind (1945: 52), an example cited as (130a) below, might be the origin of the applicative prefix *gi-*, illustrated in (130b). The other Winnebago applicative markers, the prefixes *o-*, *a-*, and *i-*, have unknown origins.

(130) Winnebago (Siouan; Midwestern United States)

- a. *hãhé'gi*
hãhé'-e'gi
night-here
'at night'

(Lipkind 1945: 52)

- b. *chaa-izhan hin-gi-guch-shannan*
deer-INDEF 1OBJ-DAT-shoot-DECL
'He shot a deer for me.'

[1878]: 24; Riggs 2016 [1852]: 79); it is unknown to me whether it has an adpositional usage.

(Craig & Hale 1988: 331)

4.3.1.3 Maricopa

According to Gordon (1986: 50), in Maricopa, the case suffixes *-ly*, *-k*, and *-m* were the sources from which the semantically and phonologically similar applicative prefixes *ily-*, *k-*, and *nym-* emerged, respectively. Note that *-ly*, *-k*, and *-m* are case suffixes rather than postpositions. From this, it is indicated that, for example, there was a common free word source for *-ly* and *ily-*, which could have been a postposition, a relational noun, or a serial verb. The same applies to the other two case-applicative pairs. Anyhow, this also matches the generalization depicted in (124). The following is an illustration of *-ly* and *ily-*:

(131) Maricopa (Yuman-Cochimí; Arizona)

- a. *kwnho lames-ly 'shvaw-k*
basket table-in 1-put-REAL
'I put the basket on the table.'

(Gordon 1986: 49)

- b. *mat tdish ily-k-shvaw-k*
earth corn in-IMP-put-REAL
'Plant the corn in the ground.'

(Gordon 1986: 50)

4.3.1.4 Rama

Craig & Hale (1988) and Craig (1990: 125-126) discuss that all of the Rama applicative prefixes, *ba-*, *yu-*, *ka-*, *su-*, and *yaa-*, come from postpositions, which are *ba(ng)*, *u*, *ka(ng)*, *su*, and *aa(k)* respectively. Below is an illustration of *u* and *yu-*²⁸. It seems that a postpositional phrase may either come after the verb or before the verb, as far as observed from Craig & Hale (1988).

(132) Rama (Chibchan; Nicaragua)

- a. *naing taata u n-aakur-u taim ki*

²⁸ According to Craig (1990: 131), *y-* in *yu-* can be analyzed as a fossilized third person marker or an epenthetic glide.

my father PSP/with I-be-ASP time in

‘I lived with my father at the time.’

(Craig & Hale 1988: 322)

- b. *nainguku naing taata ngabang yu-i-siik-i nguu ki*
thus my father silkgrass with-he-come-ASP house in

‘That’s why my father brings the silkgrass in the house.’

(Craig & Hale 1988: 313)

4.3.1.5 Katukina-Kanamari

Of the three Katukina-Kanamari applicative prefixes, *katu-* and *ama-*, come from the postpositions *katu* and *ama* respectively (Queixalós 2010: 41-43; 2014: 303)²⁹. Francesc Queixalós (personal communication, 2021) also provides examples of the applicative prefix *to-* and the postposition *-ton*³⁰. Although, in each of (133a) and (133c), and (133e), the postpositional phrase is placed in the sentence-final position and the postposition is far from the verb, it seems to be safe to assume that the applicative prefixes originate in the postpositions, given their phonological and semantic similarities and constituent order variability in the language.

(133) Katukina-Kanamari (Harákmbut-Katukinan; Amazonia)

- a. *hoki adu no-katu*
talk 1SG 2SG-SOC.INST

‘I am talking to you.’

(Queixalós 2014: 302)

- b. *i-katu-hoki i:dik*
1SG-APPL-talk-2SG 2SG

‘I am talking to you.’

(Queixalós 2014: 302)

- c. *Dyomi na=donman-na Mayon na=ama*
Doyomi CASE=go.fishing-DIR Mayon CASE=REC

²⁹ I owe the information of Queixalós (2014) to Francesc Queixalós.

³⁰ According to Queixalós (2010: 43), the remaining applicative marker, the prefix *o-*, does not have a postposition cognate and could date back to the pronoun *o* ‘other’.

‘Dyomi went fishing for Mayon.’

(Queixalós 2010: 42)

d. *Dyomi na=ama-donman-na Mayon*

Dyomi CASE=APPL-go.fishing-DIR Mayon

‘Dyomi went fishing for Mayon.’

(Queixalós 2010: 42)

e. *hoki i:dik yo-ton*

talk you me-to

‘You talked to me.’

(Francesc Queixalós, personal communication, 2021)

f. *yo-to-hoki i:dik*

me-APPL-talk you

‘I talked to you.’

(Francesc Queixalós, personal communication, 2021)

4.3.1.6 Chechen-Ingush

All of the Chechen-Ingush applicative prefixes evidently have their origins in their homophonous postpositions as Nichols (1984: 193; 2011: 411-414) discusses. Below is an illustration:

(134) Chechen-Ingush (Northeast Caucasian; North Caucasus)

a. *čaj-na ču šiekar tasan*

tea-DAT in sugar sprinkle

‘Put sugar in tea.’

(Nichols 1984: 193)

b. *šiekar čaj-na ču-tasan*

sugar-NOM tea-DAT in-sprinkle

‘Put sugar in tea.’

(Nichols 1984: 193)

4.3.1.7 Ainu

As for Ainu, one possibility of the origin of the applicative prefix *e-*, as will be discussed in detail in 6.3.1.1.3 in Chapter 6, states that it immediately derived from the obsolete postposition *e* dating back to the adverb *e* and possibly to the noun *he* ‘head’:

(135) Ainu (isolate; Japan)

<i>kapar-pe</i>	<i>kasa</i>	<i>kamuiranke-tam</i>	<i>kani-uwokkut</i>	<i>kani</i>
thin-NMLZ	hat	godgiven-sword	golden-belt	cotton
<i>kosonte</i>	<i>a-ko-ebittekka</i>	<i>atusa</i>	<i>numi</i>	<i>a-e-tursere</i>
cloak	I-APPL-tear_off	naked	stature	I-APPL-fall

‘I tear off his thin hat, god-given sword, golden belt and cotton cloak, and roll his naked body (there).’

(Kannari & Kindaichi 1963: 65)

4.3.2 Applicative suffixes from prepositions

Mirror phenomena of what we saw in 4.3.1, that is, applicative suffixes developing from prepositions, likely happened in at least 8 languages in my language sample, including 2 Indonesian languages and 5 African languages.

4.3.2.1 Warembori

The first case is Warembori. Although their historical relationship is not mentioned in Donohue (1999), the prepositions *nana*, *ta*, and *tana* in (136a), (136c), and (136e) may be assumed to be the origins of the applicative suffixes *-na*, *-ta*, and *-tane* in (136b), (136d), and (136f) respectively:

(136) Warembori (Lower Mamberamo; Indonesia)

a. *e-na* ***nana*** *e-me-ro*
1SG-eat OBL 1SG-house-IND
‘I ate in my house.’

(Donohue 1999a: 17)

b. *e-na-na* *e-me-ro*
1SG-eat-APPL 1SG-house-IND
‘I ate in my house.’

(Donohue 1999a: 17)

c. *ka-ra-pasi* ***ta*** *bunupune*
1PL.INCL-go-all ALL village

‘We all went to the village.’ *‘We went to all the villages.’

(Donohue 1999a: 170)

- d. *ka-ra-pasi-ta* *bunupune*
1PL.INCL-go-all-APPL village

‘We went to all the villages.’ *‘We all went to the village.’

(Donohue 1999a: 170)

- e. *e-mamieke* *da tana Patena*
1SG-daughter go ALL Mantarbori

‘My daughter’s gone to Mantarbori.’

(Donohue 1999a: 14)

- f. *e-ra-mo-tane* *Teba*
1SG-go-hither-APPL Teba

‘I came from Teba.’

(Donohue 1999a: 36)

4.3.2.2 Tukang Besi

As for Tukang Besi, Donohue (1999b: 242,333; 2001) suggests that the preposition *ako* as appearing in (137a) is the source from which the homophonous applicative suffix *-ako* as appearing in (137b) emerged. Also, it seems to me that, the conjunction-preposition *kene* as in (137c), and the applicative suffix *-ngkene* as in (137d) could be related in some way.

(137) Tukang Besi (Malayo-Polynesian; Indonesia)

- a. *no-balu* *te bambai ako te porai-no*
3REAL.S-buy CORE comb BEN CORE fiancée-3GEN

‘He bought a comb for his fiancée.’

(Donohue 2001: 221)

- b. *no-balu-ako* *te porai-no te bambai*
3REAL.S-buy-APPL CORE fiancée-3GEN CORE comb

‘He bought a comb for his fiancée.’

(Donohue 2001: 221)

- c. *no-wila kua koranga-no kene porai-no*
 3R.S/A-go ALL garden-3GEN and fiancée-3GEN
 ‘He went to his garden with his fiancée.’

(Donohue 2001: 221)

- d. *no-wila-ngkene te porai-no kua koranga-no*
 3R.S/A-go-APPL CORE fiancée-3GEN ALL garden-3GEN
 ‘He went to his gardens with his fiancée.’

(Donohue 2001: 221)

4.3.2.3 Koyra Chiini

According to Heath (1999: 137), in Koyra Chiini, the instrumental-comitative preposition *nda* as appearing in (138a) historically got to be suffixed to verbs like in (138b) as a result of “redrawing of word boundaries”:

(138) Koyra Chiini (Nilo-Saharan; Mali)

- a. *a-a ton nda allaa feeji korey*
 3SG.S-IPFV be.full with Just sheep white
 ‘It was full of nothing but white sheep.’

(Heath 1999: 157)

- b. *ay kaa-nda mana attee*
 1SG.S come-with 2SG.DAT tea
 ‘I have brought some tea for you(SG).’

(Heath 1999: 137)

4.3.2.4 Amharic

Next, Amberber (2000: 321-322) and Creissels (2006: 79) note the similarities of the Amharic applicative suffixes *-ll* and *-(i)bb* to the prepositions *lə-* and *bə-* respectively, connoting their possible historical relatedness (see also Amberber (1997: 3-4)). This is despite the fact that the position of the prepositional phrase with regard to the verb is at odds with the supposed historical process, as in Katukina-Kanamari in (133): constituent order change might have happened after the applicative suffixes developed. The following is an illustration of the preposition *bə-* (139a) and the applicative *-ibb* (139b):

(139) Amharic (Afro-Asiatic; Ethiopia)

- a. *astemari-wa bə-lij-u sak'ə-čč*
 teacher-DEF+F at-boy-DEF laugh+PERF-3F
 ‘The teacher laughed at the boy.’

(Amberber 2000: 323)

- b. *astemari-wa lij-u-n sak'ə-čč-ibb-ət*
 teacher-DEF+F boy-DEF-ACC laugh+PERF-3F-APPLIC-3M.O
 ‘The teacher laughed at the boy.’

(Amberber 2000: 323)

4.3.2.5 Yucatec Maya

The fifth instance comes from Yucatec Maya. According to Lehmann & Verhoeven (2006) and Lehmann (2015a), some theme applicative constructions by its only applicative suffix *-t* (140b) may be paraphrased using the locative preposition *ti'* (140a). This suggests that the preposition *ti'* is possible to be the source of the applicative suffix *-t*.

(140) Yucatec Maya (Mayan; Belize/Mexico)

- a. *táan u ts'íikil tí' u na'*
 PROG SBJ.3SG feel_angry LOC POSS.3SG mother
 ‘He is annoyed with / is scolding his mother.’

(Lehmann & Verhoeven 2006: 471)

- b. *táan u ts'íikil-t-ik u na'*
 PROG SBJ.3SG feel_angry-TRR-INCMPL POSS.3SG mother
 ‘He is annoyed with / is scolding his mother.’

(Lehmann & Verhoeven 2006: 471)

4.3.2.6 Rwanda

According to Kimenyi (1980), the Rwanda locative applicative marker has the allomorphs *-ho*, *-mo*, and *-yo*. Of these, at least *-mo* (141e) and *-ho* (141b) appear to me to come from the adpositions *mo* (141d) (or *mú* (141c)) and *ho* (141a) respectively³¹. Although *-ho* seems to only have a postposition cognate, it is likely that it originally had

³¹ Kimenyi (1980: 89) states that those adpositions are “underlying prepositions” of the respective applicative markers.

a preposition cognate, from which it emerged. In fact, *-mo* seems to have both postposition and preposition cognates: compare (141c) and (141d).

(141) Rwanda (Niger-Congo; Rwanda/DRC)

a. *umugóre y-oohere-je isóko ho umubooyi*
 woman she-send-ASP market to cook

‘The woman sent the cook to the market.’

(Kimenyi 1980: 89)

b. *umugóre y-oohere-jé-ho isóko umubooyi*
 woman she-send-ASP-to market cook

‘The woman sent the cook to the market.’

(Kimenyi 1980: 89)

c. *úmwáana y-a-taa-ye igitabo mú máazi*
 child he-PST-throw-ASP book in water

‘The child has thrown the book into the water.’

(Kimenyi 1980: 89)

d. *úmwáana y-a-taa-ye áamázi mo igitabo*
 child he-PST-throw-ASP water in book

‘The child has thrown the book into the water.’

(Kimenyi 1980: 89)

e. *úmwáana y-a-taa-yé-mo áamázi igitabo*
 child he-PST-throw-ASP-in water book

‘The child has thrown the book into the water.’

(Kimenyi 1980: 89)

4.3.2.7 Dholuo

According to Stafford (1967: 16), Okoth-Okombo (1997: 50-56), and Odhiambo & Malherbe (2009: 22-24), Dholuo has the prepositions *ni* (*ne*) ‘for’ and *e* ‘in’. Okoth-Okombo even shows a locational-copula-like usage of *ni* (142a), which I consider may be older than its prepositional usage. It at least seems true that, in (142e), *ni* is a copula and *e* is a preposition, as the author’s own gloss indicates. I postulate that these are diachronic sources of the applicative suffixes *-n* expressing ‘on behalf of’, ‘towards’, and ‘with regard to’ (Odero et al. 2017) as illustrated in (142c) and *-e* expressing ‘a place

where an action takes place’ (Odero et al. 2017) as illustrated in (142f) respectively:

(142) Dholuo (Nilo-Saharan; Kenya/Tanzania)

- a. *nyathina ni Nairobi*
child.mine be.PRES (in) Nairobi
‘My child is in Nairobi.’

(Okoth-Okombo 1997: 24)

- b. *ng’ato ong’iewo ne nyathi pala*
someone buy.PF BEN child knife
‘Someone has bought a knife for the child.’

(Okoth-Okombo 1997: 54)

- c. *gi-ndik-o-ne-gi_maber*
3PLS-write-IND-APPL-3PLO_well
‘They are writing well for them.’

(Odero et al. 2017: 10)

- d. *e tie mesa*
in foot table
‘at the foot of the table’

(Odhiambo & Malherbe 2009: 23)

- e. *rombe ni e pap*
sheep.PL COP LOC field
‘The sheeps are in the field.’

(Okoth-Okombo 1997: 50)

- f. *i-lem-o-e_mos*
2SGS-pray-IND-LOC_silently
‘You are praying silently in a place.’

(Odero et al. 2017: 11)

4.3.2.8 Kipsigis

The last example is Kipsigis. It has four applicative markers, including *-en*, illustrated in (143b), which is built on (143a). Kipsigis’s related dialect Nandi has the applicative suffix *-e*; illustrated in (144b), which, based on Creider (2002: 176-179), seems to overall cover multiple meanings of the Kipsigis suffix *-en* and originates from

the multiple-purpose preposition *e:ng* (~ *e:n*) which illustrated in (144a) (Creider 2002: 179)³². Also, Kipsigis has prepositions that can paraphrase applicative constructions (Maria Kouneli, personal communication, 2021), including the generic preposition *ε:n* ‘at/to/for’ (Driemel & Kouneli 2021: 13), formally and semantically similar to the Kipsigis applicative *-en*. In consequence, it seems to be safe to assume that the diachronic source of *-en* is a preposition.

(143) Kipsigis (Kalenjin, Nilo-Saharan; Kenya)

a. *ki-a-um*

PST-1SG/NOM-shade(take shelter)

‘I shaded/took shelter.’

(Bii et al. 2014: 306)

b. *ki-a-um-en* *got*

PST-1SG-shade-INST house.DAT

‘I shaded (took shelter) in the house.’

(Bii et al. 2014: 306)

(144) Nandi (Kalenjin, Nilo-Saharan; Kenya)

a. *mì: inkwe:k* *ce:pú:nkû:t e:n* *tábû:t*

be vegetables.NOM pot in attic

‘The vegetables are in the pot *in* the attic.’

(Creider 2002: 179)

b. *um-e:* *kè:t-í:n*

take.shelter-INST tree-that

‘Take shelter in that tree!’

(Creider 2002: 177)

4.3.3 Summary

We saw that postpositions’ becoming morphologized to their following verbs to be applicative prefixes or prepositions’ becoming morphologized to their preceding verbs to be applicative suffixes are plausible in different languages. They can be seen as manifestations of Baker (1988: 229-304)’s synchronic theory of ‘Preposition

³² I owe the information of Creider (2002) to Maria Kouneli.

Incorporation” in the domain of the diachrony.

In these cases, the reason why the applied arguments are core is that adpositions that originally accompanied them left there by attaching to the verb.

On the other hand, in my language sample, not every language shows such a clear historical background of its applicative marker(s), and there are many applicative markers whose origins are unknown. However, while, as shown above, there are several languages in which applicative prefixes come from postpositions or applicative suffixes come from prepositions, I find no cases to the contrary: applicative prefixes from prepositions or applicative suffixes from postpositions. Also, when an applicative affix does not have any semantically and phonologically similar adposition in that language, it is difficult to know whether it comes from an adposition. In such a case, however, a possibility is that the applicative affix developed from a postposition or preposition by the same mechanism illustrated in 4.3.1 and 4.3.2 after which it was lost or underwent a drastic semantic change so that it cannot be replaced with the corresponding adposition anymore. Consequently, it is possible to say that there are general diachronic links between applicative prefixes and postpositions and between applicative suffixes and prepositions.

4.4 Proposal of a correlation between applicative marker types and word order patterns

Now, let us demonstrate the relationship between applicative marker types and word order patterns of the 50 sample languages, including the ones not discussed above due to lack of evidence that they come from adpositions.

The sample languages are classified into the four patterns: languages with applicative prefix(es) only, languages with applicative suffix(es) only, languages with both applicative prefix(es) and suffix(es), and language with an applicative circumfix. These are shown in turn in the following tables, together with information of applicative marker numbers, constituent order patterns (OV order vs. VO order), and adposition types (postpositions vs. prepositions) in that language (how the former two pieces of information are relevant will be suggested later).

Table 7. Languages with applicative prefix(es) only

Language	Applicative prefix number	Basic word order
Winnebago	4	SOV, postposition
Dakota	5	SOV, postposition
Creek	2	SOV, postposition
Rama	5	SOV, postposition
Kogi	3	SOV, postposition
Katukina-Kanamari	4	VSO/SVO, postposition
Bantik	1	SVO/VOS, preposition
Kope	1	SOV, postposition
rGyalrong	1	SOV, postposition
Ainu	3	SOV, postposition
Georgian	3	SOV, postposition
Chechen-Ingush	4	SOV, postposition
Total: 12/50	36	

Table 8. Distribution of applicative prefix numbers

Applicative prefix number	1	2	3	4	5	More	Average
Language number	3/12	1/12	3/12	3/12	2/12	0/12	3.0

Table 9. Languages with applicative suffix(es) only

Language	Applicative suffix number	Basic word order
Nez Perce	5	free, postposition
Southern Sierra Miwok	4	SVO, preposition
Central Alaskan Yupik	5	SOV, postposition
Hualapai	1	SOV, postposition
Southeastern Tepehuan	1	SVO, postposition
Nahuatl	1	VSO/VOS, relational noun (postposition)
K'iche'	1	VOS, preposition
Yucatec Maya	1	VSO/VOS, preposition

Tariana	1	free, postposition
Huallaga Quechua	5	free/SOV, postposition
Kashibo-Kakataibo	3	SOV, postposition
Shipibo-Konibo	3	SOV, postposition
Rwanda	5	SVO, preposition
Herero	1	SVO, preposition
Swahili	2	SVO, preposition
Mbuun	1	SVO, preposition
Wolof	2	SVO, preposition
Koyra Chiini	1	SVO, preposition
Kipsigis	4	VSO/VOS, preposition
Maasai	3	VSO preposition
Dholuo	2	SVO, preposition
Amharic	2	SOV postposition
Rawang	1	SOV(verb-final), postposition
Barupu	8	SOV, preposition
Warembori	5	free?, preposition
Tukang Besi	3	VOS, preposition
Motuna	1	verb-final, postposition
Taba	2	SVO, preposition
Javanese	2	SVO, preposition
Kambera	1	free, preposition
Ngan'gityemerri	1	SVO, postposition
Warrongo	2	free, postposition
Kalkatungu	1	SOV, postposition
Thulung Rai	1	SOV, postposition
Kolyma Yukaghir	3	SOV, postposition
35/50	total: 85	

Table 10. Distribution of applicative suffix numbers

Applicative suffix number	1	2	3	4	5	More	Average
Language number	15/35	7/35	5/35	2/35	5/35	1/35	circa 2.43

Table 11. Languages with both applicative prefix(es) and suffix(es)

	Applicative prefix count	Applicative suffix count	Word order
Maricopa	3	1	SOV, postposition
Mosetén	2	4	SVO, postposition
2/50	total: 5	total: 5	

Table 8 and Table 10 can be revisited as follows, adding in consideration Mosetén and Maricopa:

Table 12. Distribution of applicative prefix numbers revisited

Applicative prefix number	1	2	3	4	5	More	Average
Language number	3/14	2/14	4/14	3/14	2/14	0/14	circa 2.93

Table 13. Distribution of applicative suffix numbers revisited

Applicative suffix number	1	2	3	4	5	More	Average
Language number	16/37	7/37	5/37	3/37	5/37	1/37	circa 2.43

The only language in my sample not falling into any of the above groups is Tandroy (1/50), which only has an applicative circumfix with allomorphs as already mentioned in 4.1.

It first of all should be noted that, as seen, in my language sample, OV order overwhelmingly co-occurs with postpositions and VO order with prepositions. This is a manifestation of the well-known implicational universals suggested by Greenberg (1963: 45) and Dryer (1992: 83; 2013; 2019: 65-66), which were briefly mentioned in 4.2, basically stating that OV order harmonizes with postpositions and VO order with prepositions: a correlation between constituent order patterns and adposition types. So, that applicative marker types have a correlation with adposition types inevitably means

that they have a correlation with constituent order patterns as well. “Adposition types” and “constituent order patterns” are subsumed as “word order patterns”.

The following facts can be observed from the data exhibited above. Of the 14 languages with applicative prefixes, 13 languages (circa 92.9%) have predominant OV order or postpositions. There are only 3 languages with predominant VO order or prepositions (Bantik, Katukina-Kanamari, and Mosetén), one of which also has applicative suffixes (Mosetén). In contrast, of the 37 languages with applicative suffixes, 20 (circa 54.1%) languages have predominant OV order or postpositions, and 19 languages (circa 51.4%) have predominant VO order or prepositions. From these observations, the following generalization holds as a correlation between applicative marker types and word order patterns:

(145) A correlation between applicative marker types and word order patterns

Languages with applicative prefix(es) are more likely to have predominant OV order and postpositions than languages with applicative suffix(es) are.

More precisely, applicative prefixes generally co-occur with predominant OV constituent order and postpositions whereas applicative suffixes co-occur with both word order patterns to similar extents.

Thereby, it can be seen that the distribution of applicative marker types and word order patterns in the whole language sample exhibited is overall consistent with the theoretical assumption of the historical relationship between applicative markers and adpositions discussed and is attested by known evidence about diachronic relationships between applicative prefixes and postpositions and between applicative suffixes and prepositions. In other words, the theoretically reasonable historical change discussed in 4.2 functions as a diachronic explanation of the correlation summarized in 4.3.3 above.

As well as the correlation between adposition types and applicative marker types, the correlation between constituent order patterns and applicative marker types can be historically explained, in the following way. First of all, as discussed in Dryer (2019: 66), the correlation between constituent order patterns and adposition types are historically motivated, in such a way that, when verbs are grammaticalized into adpositions, they inevitably result in prepositions rather than postpositions in VO languages and in

postpositions rather than prepositions in OV languages. Then, in turn, prepositions are grammaticalized into applicative suffixes and postpositions into applicative prefixes, and thus constituent order patterns and applicative marker types prove to be connected via adposition types.

Dryer (2019: 67-69) also discusses a correlation between GENITIVE AND NOUN order and adposition types whereby languages with GenN order are likely to have postpositions rather than prepositions, and languages with NGen order are likely to have prepositions rather than postpositions. This is historically motivated as well, in that adpositions arise from head nouns in genitive construction, as Dryer illustrates with English:

(146) English (Germanic; world language)

- a. *in the side of* > NP *inside* NP
- b. *by the side of* > NP *beside* NP
- c. *by the cause of* > NP *because* NP

(Dryer 2019: 68)

Based on that, it should be the case as well that GENITIVE AND NOUN order has such a historical connection with applicative marker types as well.

Demonstrating these connections by directly comparing actual examples of applicative marker types on the one hand and constituent order patterns/GENITIVE AND NOUN order patterns on the other is left for future studies.

In this section, we saw how the way in which applicative markers develop from adpositions can explain the correlation. However, it does not explain the whole picture: the correlation (145) does not state that every language with applicative prefix(es) has predominant OV order and postpositions or every language with applicative suffix(es) has predominant VO order and prepositions. Particularly, as already seen, there are many languages which have applicative suffix(es) and OV order and postpositions. The reason why this is the case will be discussed from a historical point of view in Section 4.5.

4.5 Diachronic link between applicative suffixes and benefactive applicative periphrases: applicative suffixes from verbs

To explain how languages with applicative suffix(es) do not have special favors for any particular word order patterns, it is necessary to consider the other major diachronic

source of applicative markers than adposition, which is verb (Haspelmath 1995: 41-42; Baker 1996: 431; Garrett 1990; Peterson 2007: 130-140; Creissels 2010; Zúñiga & Kittilä 2019: 222). Particularly, it will be helpful to see how verbs grammaticalize into benefactive applicative markers. Development of a benefactive applicative marker from a verb involves the intermediate stage called “periphrastic benefactive constructions” (Peterson 2007: 134,135) or “benefactive applicative periphrases” (“BAP”) (Creissels 2010). According to Creissels (2010: 30), “applicative periphrases are biverbal constructions functionally comparable to monoverbal constructions headed by applicative verb forms” and “the two verbs they involve can be designated as *lexical verb* (abbreviated as “Vlex”) and *verb-operator* (abbreviated as “Vop”).” It is known that the valency-operator verb is in many cases of benefactive applicative periphrases a verb for ‘give’ (Creissels 2006: 79; 2010: 33; Peterson 2007: 229-230). Creissels (2010) gives three-way formal distinction to benefactive applicative periphrasis according to whether Vlex or Vop receives the marker: “the serializing type”, “the marked-Vop type”, and “the marked-Vlex type”. Below are cited some examples for each of the three classes:

(147) “The serializing type”³³: Kana (Cross-river Bantu, Niger-Congo; Nigeria)

Dwīkā wēè ɔ́b tūú nɛ̀ Nūtè

Nwiika PST roast three-leave_yam give Nute

‘Nwiika roasted a three-leave yam for Nute.’

(Ikoro 1996: 254, cited in Creissels 2010: 39)

(148) “The marked-Vop type”: Efik (Benue-Congo, Niger-Congo; Nigeria)

nám útóm é̀mì nɔ̀ mí!

do work DEM give 1SG

‘Do this work for me!’

(Welmers 1973: 369-70, cited in Creissels 2010: 39)

(149) “The marked-Vlex type”: Tamil (Dravidian; India/Sri Lanka)

³³ Creissels (2010: 37) defines *serial verb construction* as “a complex predicate (i.e., a monoclausal construction involving two or more verbs) showing the following two characteristics:

a. no linking element is present between the verbs involved in the construction;

b. none of the verbs involved in the construction is in a form implying a non-autonomous status.”

Rājā Kumār-ukkuk katav-ait tirant-u koṭutt-āṅ
 Raajaa Kumaar-DAT door-ACC open-CONV give.PAST-S3SM
 ‘Raajaa opened the door for Kumaar.’

(Krishnamurti 2003: 376, cited in Creissels 2010: 44)

As suggested in Creissels (2010: 63), applicative affixes are supposed to arise from such valency-operator verbs by further progress of grammaticalization. Similarly, Peterson (2007: 134-135) estimates that Japanese periphrastic benefactive construction, which I consider corresponds to “the marked-Vlex type” in Creissels (2010: 43)’s term, is in a process of grammaticalization into a prototypical applicative construction:

(150) Japanese (Japonic, Japan)

boku=wa Hanako=ni hon=o kat-te yat-ta
 I=TOP Hanako=DAT book=ACC buy-CONJ give-PAST
 ‘I bought a book for Hanako’s sake.’

(Shibatani 1996: 160, cited in Peterson 2007: 134)

As for my language sample, although some languages have applicative suffixes whose origins are unknown, this development pattern is confirmed for some languages, which will be shown below. The first is Nez Perce: Rude (1991: 186-187) suggests that the benefactive applicative suffix *-a’n* as illustrated in (151a) below is historically related to the verb *’eni* ‘give’, which also yielded a benefactive postposition appearing in (151b):

(151) Nez Perce (Sahaptin-Klamath; Idaho)

a. *walc paa-ny-a’n-ya ’aayato-na*
 knife 3S.3O-make-BEN-PAST woman-O
 ‘He made the woman a knife.’

(Rude 1991: 186)

b. *walas-na paa-ni-ya ’aayato-’ayn*
 knife-O 3S.3O-make-PAST woman-BEN
 ‘He made a knife for the woman.’

(Rude 1991: 186)

Secondly, as discussed in 4.3.2.7, the applicative suffix *-ni* (~ *-ne*) in Dholuo, although its immediate source seems to be the preposition *ni*, may date back to a copula verb. An

additional example of a copula usage of *ni* is cited below:

(152) Dholuo (Nilo-Saharan; Kenya/Tanzania)

nyathi ni gi buk
child be with book
'The child has a book.'

(Okoth-Okombo 1997: 51)

Thirdly, as suggested in Chapter 1, the *Tukang Besi* applicative suffix *-ako* ultimately dates back to the verb *ako* 'do for' (Donohue 1999b: 242,333), although the prepositional stage (153b) intervenes in some way between the verbal (153a) and applicative stages (153c). Another *Tukang Besi* applicative suffix *-ngkene* (153f) also instantiates this. Its diachronic source seems to be the verb *kene* 'accompany' (Donohue 1999b: 187,188) (153d), which also developed a prepositional usage (153e).

(153) *Tukang Besi* (Malayo-Polynesian; Indonesia)

a. *no-wila-ako-'e na ina-no kua daoa*
3R-go-do.for-3OBJ NOM mother-3POSS ALL market
'They went for their mother to the market.'

(Donohue 1999b: 201)

b. *no-'ema te polisi ako te ina-no*
3R-answer CORE policeman BEN CORE mother-3POSS
'He answered the policeman for his mother.'

(Donohue 1999b: 227)

c. *no-wila-ako te ina-no i daoa*
3R-go-APPL CORE mother-3POSS OBL market
'She went to the market for her mother.'

(Donohue 1999b: 232)

d. *no-kene te ina-no*
3R-accompany CORE mother-3POSS
'She accompanied her mother.'

(Donohue 1999b: 188)

- e. *no-wila kene ina-no*
 3R-go accompany mother-3POSS
 ‘She went with her mother.’

(Donohue 1999b: 188)

- f. *no-wila-ngkene te ina-no*
 3R-go-accompany CORE mother-3POSS
 ‘She went with her mother.’

(Donohue 1999b: 201)

The third case is from Barupu, which was also cited in 1.1 in Chapter 1. According to Donohue (2003: 138), the applicative suffix *-ke* (154b) is “plausibly related to” the verb *ke* ‘sit’ (154a):

(154) Barupu (Skou; Papua New Guines)

- a. *bio=venavena k-o-ke-i[sic] pita*
 woman=witch R-<3SG.F>-sit down
 ‘The witch sat down.’

(Donohue 2003: 123)

- b. *a k-u-ai-ke-ni*
 rain R-3SG.F-rain-upon-1SG.F
 ‘It’s raining on me.’

(Donohue 2003: 122)

What should be noted here is that, as suggested from every of the above examples, valency-operator verbs are more likely to result in suffixes than prefixes with regard to the lexical verb, so that Creissels (2010) mentions that “irrespective of the status of the language in question with respect to constituent order typology, ‘give’ almost always occupies the second position in BAPs” (p. 33) and concludes that “BAPs using verbs other than ‘give’ in valency operator function, or in which ‘give’ occurs in first position, are exceptional” (p. 63) (see further Creissels 2006: 79). This is further supported by the tendency which Bybee et al. (1990) show accompanies every constituent order pattern based on extended cross-linguistic survey on suffix preference, which can be summarized as: with regard to a stem, a following element is more likely to morphologize to it to be a suffix than a preceding element is likely to morphologize to it to be a prefix. Concerning

serial verbs in particular, Bybee et al. (1990: 16) also say that “in some serial constructions, the second verb is the one to grammaticalize, yielding a postposed gram and perhaps eventually a suffix”.

All that has been stated so far should be considered in combination with the fact that the verb ‘give’ is the most frequent verbal source of applicative markers *in general*, as suggested by Baker (1996: 431), Creissles (2006: 81), and Zúñiga & Kittilä (2019: 222). Therefore, the following comes to be plausible: when the diachronic source of an applicative affix is a verb, the applicative marker type is likely to be suffix³⁴. This is because applicative affix must reflect its original position with regard to the head verb, in accordance with the theoretical background discussed in Section 4.2 and with Givón (2015: 25)’s aphorism “if today’s bound morphemes are yesterday’s lexical words, then today’s morphology is yesterday’s syntax”. The point is that this holds no matter which combinations of constituent order and adposition types the language may have (among OV order and postpositions, VO order and prepositions, VO order and postpositions, and OV order and prepositions).

The link between applicative suffixes and valency-operators as Creissels (2010) calls is considered also reflected in the following observation: of languages in my sample which are classified as ones with applicative suffix(es), a good proportion (16/37) has only one applicative suffix, which I named “single-applicative languages” in Chapter 3. The high frequency of single-applicative languages with applicative suffix(es) (16/37

³⁴ Creek is an exceptional case, in which the instrumental applicative marker *is-* (~ *s-*) a prefix and is related with the verb *is* (Booker 1980) or *is-íta* (Martin 2000: 392) ‘take, hold’:

(155) Creek (Muskogean; Oklahoma)

a. *ihéy-sítá*

ihéywa-isíta

his/her.wife-take

‘to take a wife’

(Martin 2011: 123)

b. *Bill ishoccéycka cóka-n is-hócceyc-ís*

Bill pen letter-OBL INST-write:LGR-IND

‘Bill is writing a letter with a pen.’

(Martin 2000: 392)

cases; 45.9%), as indicated in Table 13, is contrasted to the low frequency of single-applicative languages with applicative prefix(es) (3/14 cases; 21.4%), as indicated in Table 12. I maintain that this contrast would be attributed to the above-mentioned fact that ‘give’ verbs are the most frequent verb sources of applicative suffixes³⁵. This is based on the assumption that, probably, a language in many cases has only one ‘give’ verb of highly frequent use, so that more than one applicative affix is difficult to develop through that grammaticalization pathway. This situation is contrastive to that of adpositions, in that adpositions are more often than not numerous each of which has some more or less specific meaning and deserves grammaticalization into an applicative marker, which we saw is the case for many languages discussed in 4.3.1 and 4.3.2. This is further confirmed by the following observation of the sample languages:

There are 19 languages with applicative suffixes and postpositions. Of them, as many as 10 languages (circa 52.6%) have only one applicative suffix.

There are 18 languages with applicative suffixes and prepositions. Of them, only 6 languages (circa 33.3%) have only one applicative suffix.

This observation suggests that, when prepositions become applicative suffixes, it may tend to result in more than one applicative suffix per language, and, when non-prepositions (verbs in many cases) become applicative suffixes, it may tend to result in only one applicative suffix per language. Maricopa shows a good contrast by itself, which has three applicative prefixes developing from postpositions (Gordon 1986: 50), which was discussed in 6.5.1, and one benefactive applicative suffix (Gordon 1986: 85-87) which could come from a valency-operator verb³⁶.

³⁵ The high frequency of benefactive applicatives in single-applicative languages (e.g., Kalkatungu and Thulung Rai) may be a further support, in that ‘give’ verbs usually grammaticalize to benefactive applicative markers first (Baker 1996: 431; Peterson 2007: 229-230; Creissels 2010: 34). In that way, applicative markers whose origins are not explicitly known could prove to have verbal origins. I will not discuss it in detail in the present study.

³⁶ Also, the Warrongo applicative suffixes *-riL⁽¹⁾* and *-riL⁽²⁾* could be integrated into one, which Tsunoda (1998) differentiates based on the fact that the semantic role of the applied argument is comitative when

4.6 Summary of the diachronic links

When a language with applicative suffix(es) has predominant OV order and postpositions, it is very likely that the applicative suffix(es) come(s) from valency-operator verb(s) because valency-operator verbs tend to become suffixes rather than prefixes and because the adposition possibility is ruled out. Of course, it is possible that that language formerly had preposition(s) which yielded the applicative suffix(es) and then disappeared. However, such a case seems to be uncommon in that word order changes are generally more radical changes than morphologization of an independent word to another.

When a language with applicative suffix(es) has predominant VO order and prepositions, both preposition-to-applicative process and verb-to-applicative process seems to be possible to similar extents.

Therefore, it is plausible that applicative suffixes generally develop from prepositions or valency-operator verbs, while applicative prefixes generally develop from postpositions but not from valency-operator verbs. This discrepancy seems to explain the situation in which there are more languages with applicative suffix(es) (37/50; 74%) than languages with applicative prefixes (14/50; 28%), as shown and discussed with my language sample in Section 4.4. And it thus explains why not a small number of the languages with applicative suffix(es) has OV order and postpositions when almost all of the languages with applicative prefix(es) have VO order and prepositions.

4.7 Conclusion

Applicative prefixes are likely to co-occur with the OV-postposition combination whereas applicative suffixes co-occur with the VO-preposition combination and the OV-postposition combination to similar extents. This is a correlation related to word order patterns that has never been proposed, and can be explained by the following facts from diachronic perspective. First, applicative prefixes and applicative suffixes often develop from postpositions and prepositions respectively, through what can be seen as a historical

the base is intransitive whereas it is instrument when the base is transitive. If they are integrated, it will further strengthen the idea I discuss here.

manifestation of Baker (1988)'s "Preposition Incorporation", which was mentioned in 4.3.3. Second, applicative suffixes can develop from second-position (final-position) verbs (often, 'give') in periphrastic applicative constructions, in which dependent verbs or "valency-operator" (Creissels 2010) verbs are in many cases postposed to head verbs. The second fact is compatible with the observation that, of languages in my sample which are classified as ones with applicative suffix(es), a good proportion has only one applicative suffix.

Sure, adpositions and verbs are never the only possible diachronic sources of applicative markers but other sources are known to be possible as well including nouns, adverbs, and causative markers (Peterson 2007: 131,133-141), and some languages in and out my sample have not been provided with information about their applicative markers' origins. However, adpositions and verbs are much more common than them as sources of applicative markers (Peterson 2007: 123-171; Zúñiga & Kittilä 2019: 222-223). Moreover, the historical links between postpositions and applicative prefixes, between prepositions and applicative suffixes, and between valency-operator verbs and applicative suffixes are secure, given the theoretical reasonableness and typological evidence I presented. Thus, it seems to be safe to say that the correlation claimed primarily stems from the way postpositions, prepositions, and verbs develop into applicative markers, and which applicative marker types these sources primarily result in respectively.

Finally, there is another implication the present study has to offer. Greenberg (1963: 56-57), Hawkins & Gilligan (1988), and Bybee et al. (1990) suggest that OV languages are more likely to have a suffix predominance than VO languages are. In historical terms, I consider that one contribution to this tendency is the well-observed processes whereby postpositions morphologize to their preceding governed terms and prepositions morphologize to their following governed terms. However, the processes the present study focused on entail the opposite directions, whereby postpositions morphologize to their following verbs and prepositions morphologize to their preceding verbs. Thus, it is expected that, if suffixes and prefixes originating in these pathways, namely applicative affixes, are excluded from the scope, a stronger correlation between affix positions (affix types) and adposition types will be gained than have been claimed.

5 Optional applicativization

Before getting into discussions of optional applicatives and obligatory applicatives, it is better to recall the categorization of different types of optional applicativization and obligatory applicativization and relationships among them which were discussed in Chapter 2. Table 14 below shows the precise categorization relationships among the different types of optional applicativization and obligatory applicativization that will be in the scope of the present study. I have not introduced yet the classification of obligatory applicativization shown in Table 14, which I will in 6.2 in Chapter 6, but only “fully-obligatory applicativization” matters in the present chapter, which can be understood for the purpose of the present chapter as obligatory applicativization as introduced in 2.5 in Chapter 2.

Table 14. Types of applicativization in terms of optionality/obligatoriness of applicativization and optionality/obligatoriness/impossibility of promotion

Optional applicativization (paraphrase is possible)			Obligatory applicativization (both promotion and paraphrase are impossible)		
with obligatory promotion	with optional promotion	with no promotion option	fully- obligatory	conditionally-obligatory	
				role- conditioned / feature- conditioned	base-conditioned
grammatical applicativization				lexical applicativization	
				deponent	non- dep.

The present chapter’s topic will be the categories which are found under the label of optional applicativization in Table 14, and applicative markers in my sample which have been verified as optional applicative markers will be in the scope.

5.1 Cognate-sustained vs. non-cognate-sustained optional applicative markers

In Chapter 2, some important aspects of optional applicative constructions were discussed in order to elaborate the definition of applicative constructions. It can be summarized as follows.

Optional applicative constructions are commonly deemed a prototypical manifestation of applicative constructions, as opposed to obligatory applicative constructions. Meanwhile, different optional applicative markers have different values with regard to optionality vs. obligatoriness vs. impossibility of promotion, so that applicative markers can be classified into applicative markers with optional promotion, applicative markers with obligatory promotion, and applicative markers with no promotion option. Applicative constructions in which no promotion occurs has an applicative property in the fact that semantic-valency-increasing is observable even when promotion is not caused, in addition to the fact, in cases of optional promotion, that applicative marker's form does not change from when promotion is caused.

No matter which of the three types distinguished based on the realization of promotion it falls into, an optional applicative marker, by definition, has a semantically compatible case-marker or adposition, and it may be either historically related with it or not. As far as I recognize, no previous studies have ever attempted to approach optional applicative markers from the perspective of whether it has such a historical relationship or not. In the present study, if such a historical relationship holds, the optional applicative marker will be called a “cognate-sustained optional applicative marker”, and if it does not, it will be called a “non-cognate-sustained optional applicative marker”. Cognate-sustained optional applicative markers seem in many cases to be derivations of the case-marker or adposition that is used for the paraphrase, and are illustrated below. First, in the Katukina-Kanamari example, it can be seen that (156a) and (156b) have the same predicative verbs and thematic structures, and the recipient case marker =*ama* is cognate with the applicative prefix *ama-* as already discussed in 4.3.1.5 in Chapter 4:

(156) Katukina-Kanamari (Harákmbut-Katukinan; Amazonia)

- a. *Dyomi na=donman-na Mayon na=ama*
Doyomi CASE=go.fishing-DIR Mayon CASE=REC

‘Dyomi went fishing for Mayon.’

(Queixalós 2010: 42)

b. *Dyomi na=ama-donman-na Mayon*

Dyomi CASE=APPL-go.fishing-DIR Mayon

‘Dyomi went fishing for Mayon.’

(Queixalós 2010: 42)

Another straightforward example comes from Amharic: (157a) and (157b) convey the same propositional meanings, and the case prefix *le-* and the benefactive applicative suffix *-ll* are supposed to be historically related as already discussed in 4.3.2.4 in Chapter 4:

(157) Amharic (Afro-Asiatic; Ethiopia)

a. *dañña-w la-Aster fərrədə-(ll-at)*

judge-DEF for-Aster Judge-PF-3M.S-(for-3F.O)

‘The judge judged in favor of Aster (= He acquitted her).’

(Amberber 1997: 4)

b. *dañña-w Aster-in fərrədə-ll-at*

judge-DEF Aster-ACC Judge-PF-3M.S-for-3F.O

‘The judge judged in favor of Aster (= He acquitted her).’

(Amberber 1997: 4)

Non-cognate-sustained optional applicative markers are illustrated below. First, the Winnebago applicative prefix *ho-* (158b) is optional owing to the not clearly related case suffix *-eja* (158a) (*-eja* originates from an adverb ‘there’ according to Lipkind 1945: 52).

(158) Winnebago (Siouan; Midwestern United States)

a. *kook-eja naanzhin-je-enan*

box-LOC stand-AUX-DECL

‘It is standing in the box.’

(Craig & Hale 1988: 314,328)

b. *kook-ra ho-nanzhin-je-enan*

box-DEF INESSIVE-stand-AUX-DECL

‘It is standing in the box.’

(Craig & Hale 1988: 314,328)

Nez Perce seems to have at least four non-cognate-sustained optional applicative markers. In the following examples, the locative *-oo* (~ *-uu*) (159b), the locative *-c’aa* (~ *-c’a*) (159d), the ablative *-aapiik* (159f), and the associative *-tiween* (~ *-twe*) (159h) are used in exchange of the case suffixes *-pe* (159a), *-pa* (159c), *-ki’nix* (159e), and *-yiin* (159g) respectively. Based on Table 4 in 3.4.3.1.1 in Chapter 3, it seems hard to suppose a historical relationship for each applicative-case pair; at least it seems that none of the applicative suffixes immediately derives from its case suffix counterpart.

(159) Nez Perce (Sahaptin-Klamath; Idaho)

a. *’iniit-pe hi-paayn-a ’aayat*

lodge-LOC 3NOM-arrive-PST woman

‘The woman arrived at a/her lodge.’

(Rude 1991: 188)

b. *’inii-ne pa-payn-oo-ya ’aayato-m*

lodge-OBJ 3SUBJ.3OBJ-arrive-LOC-PST woman-ERG

‘The woman arrived at a lodge.’

(Rude 1991: 188)

c. *hi-watiki-s-a miya’ac-pa*

3NOM-step-PROG-SG.NOM child-LOC

‘He is stepping on/over the child.’

(Rude 1991: 189)

d. *po-otix-c’a-s-a miya’as-na*

3SUBJ.3OBJ-step-LOC-PROG-SG.NOM child-OBJ

‘He is stepping over the child.’

(Rude 1991: 189)

e. *hi-pa-ws-payx-toq-a meqseem-ki’nix*

3NOM-PL.NOM-journey-arrive-back-PST mountain-ABL

‘They journeyed back from the mountains.’

(Phinney 1934: 41: 6, cited in Rude 1991: 191)

- f. *kaa hi-na-s-waka 'yk-aapiik-s-a*
 and 3NOM-PL.OBJ-fly-ABL-PROG-SG.NOM
 'And she is flying away from us.'
 (Aoki 1970: 97, cited in Rude 1991: 191)

- g. *lawtiwaa-yiin hi-tuuqi-s-ix*
 friend-ASSOC 3NOM-smoke-PROG-PL.NOM
 'He is smoking with a/his friend.'
 (Rude 1991: 192)

- h. *lawtiwaa-na pee-tuqi-twe-c-e*
 friend-OBJ 3SUBJ.3OBJ-smoke-ASSOC-PROG-SG.NOM
 'He is smoking with a friend.'
 (Rude 1991: 192)

There are also cases in which an optional applicative marker is at the same time cognate-sustained and non-cognate-sustained, there being multiple non-applicative means that can substitute the applicative marker in question. Examples are given below. First, in *Tukang Besi*, the applicative suffix *-ako* ((160b) and (160d)) may be replaced by either its cognate *ako* (160a) or non-related *kene* (160b), dependent on the semantic role encoded:

(160) *Tukang Besi* (Malayo-Polynesian; Indonesia)

- a. *no-balu te bambai ako te porai-no*
 3R.SUB-buy CORE comb BEN CORE fiancée-3GEN
 'He bought a comb for his fiancée.'
 (Donohue 2001: 221)

- b. *no-balu-ako te porai-no te bambai*
 3R.SUB-buy=APPL CORE fiancée-3GEN CORE comb
 'He bought a comb for his fiancée.'
 (Donohue 2001: 221)

- c. *no-tu'o te kau kene baliu*
 3R.S/A-fell CORE tree INSTR axe
 'He chopped the tree with an axe.'
 (Donohue 2001: 220)

d. *no-tu'o-ako te baliu te kau*
 3R.S/A-fell-APPL CORE axe CORE tree
 'He used the axe to chop the tree.'

(Donohue 2001: 220)

In this chapter, with regards to each of these two types of applicative markers distinguished based on the diachronic criterion, two aspects of applicativization will be investigated. The first is through what diachronic processes each of the two types emerges. The second is how the distinction is related with the optionality and obligatoriness of promotion.

5.2 Diachronic backgrounds

Here, two theoretically possible patterns of diachronic processes leading to the status of optional applicative marker will be set, and it will be discussed how those patterns interact with the distinction of cognate-sustained optional applicative marker and non-cognate-sustained applicative marker introduced above. By doing so, differences in historical backgrounds of the two variants will be examined.

Note that, hypotheses that will be presented and discussed here as to diachronic processes of the rise and fall of applicative constructions and their non-applicative counterparts with examples of specific languages are, although they are supposed to be likely to some extent, never the only possibilities, and it will be done in Chapter 7 to gather up all theoretically possible patterns and show the whole picture.

Optional applicative marker's historical backgrounds may largely be divided into two patterns from the perspective of whether or not it was optional since its naissance, relating to whether the semantically compatible case-marker or adposition was already existent at the time when the applicative marker developed. Thus, the two patterns are depicted below:

Pattern #op1³⁷ (cases in which the optional applicative marker was optional since its naissance)

- The applicative marker had the semantically compatible case-marker or adposition since

³⁷ The symbol *op* denotes "optional" of "optional applicatives".

it came into being, so that it was optional since then.

- The applicative marker and the semantically compatible case-marker or adposition may be either cognate with each other or not.
- There may be another semantically compatible case-marker or adposition which came into being at some point.

Pattern #op2 (cases in which the optional applicative marker was originally obligatory)

- The applicative marker was formerly a fully-obligatory marker, because it had no case-marker or adposition semantically compatible with the applicative marker.
- Then, a semantically compatible case-marker or adposition developed from some lexical source; the lexical source could be one from which the applicative marker developed, or, some of the case-markers or adpositions in that language or the applicative marker in question changed its meaning so that they become semantically compatible.

In what follows, let us discuss each of the two patterns with regards to each of cognate-sustained optional applicative markers and non-cognate-sustained optional applicative markers.

5.2.1 Cognate-sustained optional applicative markers

In Table 15 below, cognate-sustained optional applicative markers in my sample are exhibited, together with the cognate case-markers or adpositions that are used as non-applicative means. For source literature and example sentences showing what semantic similarity each pair of an applicative marker and its cognate case-marker or adposition actually has, see 4.3 in Chapter 4.

Table 15. Cognate-sustained optional applicative markers and the sustaining case-marker/adpositions

Language	Applicative marker	Semantically compatible case-marker or adposition (not necessarily comprehensive)
Dakota	<i>ki-</i> (~ <i>kic'i-</i>)	<i>kic'i</i>
	<i>a-</i>	<i>akan</i>
	<i>e-</i>	<i>ekta</i>
	<i>o-</i>	<i>ohna</i>
Rama	<i>ba-</i>	<i>ba(ng)</i>
	<i>yu-</i>	<i>u</i>
	<i>ka-</i>	<i>ka(ng)</i>
	<i>su-</i>	<i>su</i>
	<i>yaa-</i>	<i>aa(k)</i>
Maricopa	<i>ily-</i>	<i>-ly</i>
	<i>k-</i>	<i>-k</i>
	<i>nym-</i>	<i>-m</i>
Katukina-Kanamari	<i>katu-</i>	<i>katu</i>
	<i>ama-</i>	<i>ama</i>
	<i>to-</i>	<i>ton</i>
Chechen-Ingush	<i>chy-</i>	<i>chy</i>
	<i>t'y-</i>	<i>t'y</i>
Ainu	<i>e-</i>	<i>e (?)</i>
	<i>ko-</i>	<i>ko (?)</i>
Warembori	<i>-na</i>	<i>nana</i>
	<i>-ta</i>	<i>ta</i>
	<i>-tane</i>	<i>tana</i>
Tukang Besi	<i>-ngkene</i>	<i>kene</i>
	<i>-ako</i>	<i>ako</i>
Koyra Chiini	<i>-nda</i>	<i>nda</i>
Amharic	<i>-ll</i>	<i>lə-</i>
	<i>-bb</i>	<i>bə-</i>
Dholuo	<i>-e</i>	<i>e</i>
	<i>-ni</i>	<i>ni</i>
Yucatec Maya	<i>-t</i>	<i>ti, ich</i>
Rwanda	<i>-ho (~ -mo)</i>	<i>ho (~ mu)</i>
Nez Perce	<i>-a'n</i>	<i>'ayn</i>
Kipsigis	<i>-en</i>	<i>ε:n</i>
total: 15	total: 33	

When a case-marker or adposition and an applicative marker have an immediate historical relationship with each other, it seems to generally hold that the former is the

diachronic sources of the latter, but not the other way around. This means that, when a cognate-sustained optional applicative marker developed, the cognate case-marker or adposition was already existent. Thus, a cognate-sustained optional applicative marker can be a relatively new development, since a short period will less easily allow the semantically compatible case-marker or adposition to disappear from that language or change its meaning drastically so that it becomes unavailable as a non-applicative counterpart of that applicative marker. Consequently, the following generalization holds:

(161) A correlation between an applicative marker with a cognate case marker (or adposition) and optionality of applicativization

When an applicative marker and a case marker (or adposition) are clearly historically related, it is likely that they realize optional applicativization.

In these cases, it does not seem that common that a case-marker or adposition not cognate with the applicative marker is used instead of the cognate one. An exception was shown in 5.1: *Tukang Besi*, which has applicative markers that are at the same time cognate-sustained and non-cognate-sustained optional applicative markers. Another example is given below: in Rwanda, *-ho* applicative constructions like in (162c) may be paraphrased by means of either the related *ho* (162a) or the unrelated *kw-* (162b).

(162) Rwanda (Niger-Congo; Rwanda/DRC)

- a. *umugóre y-oohere-je isóko ho umubooyi*
 woman she-send-ASP market to cook
 ‘The woman sent the cook to the market.’

(Kimenyi 1980: 89)

- b. *umugóre y-oohere-je umubooyi kw’iisóko*
 woman she-send-ASP cook to.market
 ‘The woman sent the cook to the market.’

(Kimenyi 1980: 89)

- c. *umugóre y-oohere-jé-ho isóko umubooyi*
 woman she-send-ASP-to market cook

‘The woman sent the cook to the market.’

(Kimenyi 1980: 89)

Although the applicative markers exhibited in Table 15 are supposed to come from the case-marker or adposition exhibited in its right side, it is not impossible that there was an ultimate common source which yielded both markers, like a verb or a noun (in that case as well, the expression “cognate-sustained optional applicative markers” holds, by the present study’s interpretation of the term “cognate”). In that case, to the extent that it is possible that the ultimate source firstly yielded the applicative marker and only later added the case-marker or adposition, it could be the case that the applicative marker was a fully-obligatory applicative marker when it was yielded (although there could have existed a non-related semantically compatible one), and its optionality was gained through the later development of the case-marking or adposition counterpart from the common ultimate source. In such cases, Pattern #op2 will be applied. Instances in which this could be the case in Table 15 is the *Tukang Besi* suffix *-ako* and the *Nez Perce* suffix *a’n*, which are known as historically related with the preexistent verbs *ako* ‘do for’ (Donohue 1999b) and *eni* ‘give’ (Rude 1991) (*Aoki* (1970: 102)’s *ini* ‘give’ may correspond to it) respectively.

From the observation that in most cases a case-marker or adposition historically related with an applicative marker may serve as its non-applicative counterpart, it is implied that fully-obligatory applicative markers are likely to result from disappearance of their semantically compatible case-marker (or adposition)s rather than from semantic changes.

5.2.2 Non-cognate-sustained optional applicative markers

We saw that, for cognate-sustained optional markers, although both Pattern #op1 and Pattern #op2 are possible, Pattern #op1 is the more likely. Contrastively, if the applicative marker is a non-cognate-sustained optional applicative marker, although both patterns are fairly possible, I deem that Pattern #op1 is the less likely, for the following reasons. As already discussed, as is the case also for a historically related semantically compatible case-marker or adposition, when a historically unrelated semantically compatible case-marker or adposition which already existed at the time when an applicative marker arose still exists, it indicates that the history of the applicative marker is relatively short. This

in turn suggests that, if the source of the applicative marker is a case-marker or adposition, that case-marker or adposition is likely to still exist with the meaning unchanged together with the historically unrelated semantically compatible case-marker or adposition, to serve as a non-applicative counterpart of the applicative marker, because the source case-marker or adposition should have been existent at least when the applicative marker arose. This goes against the observation that, in my language sample, most applicative markers that have a historically unrelated semantically compatible case-marker or adposition (namely, non-cognate-sustained optional applicative marker) do not have a historically related semantically compatible case-marker or adposition, meaning that it is unlikely that the historically unrelated semantically compatible case-marker or adposition already existed when the applicative marker arose. As already noted, exceptions are found in *Tukang Besi* and *Rwanda* (possibly also in *Ainu*), in which an applicative marker may be replaced by either cognate case-marker or adposition or non-cognate case-marker or adposition. These cases are already optional by the existence of the historically related semantically compatible case-marker or adposition, thus falling into Pattern #op1, and are optional also in the sense that they have a historically unrelated semantically compatible case-marker or adposition as well. The cases in which an applicative marker does not have a historically related semantically compatible case-marker or adposition may be explained by their verbal or nominal origins, rather than by the length of its history. However, this amounts to saying that they were originally fully-obligatory applicative markers. Consequently, applicative markers which only have historically unrelated semantically compatible case-marker (or adposition)s are not likely to fall into Pattern #op1.

In what follows, how non-cognate-sustained optional applicative markers may likely fall into Pattern #op2 will be discussed with my sample languages. First of all, it will be discussed that the *Ainu* case coheres with the discussion made above.

Information of the languages with non-cognate-sustained optional applicative markers and the case-marker or adposition counterparts in my sample is exhibited in Table 16³⁸. When the language has both related and unrelated case marker/adpositions (*Tukang Besi* and possibly *Ainu*), the related ones, which were included in Table 15, are put in

³⁸ Information source of the elements exhibited in Table 17 are the literature presented in 1.3 in Chapter 1.

parentheses.

Table 16. Non-cognate-sustained optional applicative markers and the sustaining case-marker/adpositions

Language	Applicative marker	Semantically compatible case-marker or adposition (not necessarily comprehensive)
Ainu	<i>e-</i>	<i>(e(?),) ta, ne, un</i>
	<i>ko-</i>	<i>(ko(?),) ta, ne, un</i>
	<i>o-</i>	<i>ta</i>
Kolyma Yukaghir	<i>-re</i>	<i>-ge</i>
	<i>-ri</i>	<i>-in</i>
Rawang	<i>-a</i>	<i>dypvt</i>
Georgian	<i>i-</i>	<i>-isatvis</i>
	<i>a-</i>	<i>-ze</i>
Winnebago	<i>ho-</i>	<i>-eja</i>
Nez Perce	<i>-c'a</i>	<i>-pa</i>
	<i>-oo (~ -uu)</i>	<i>-pe</i>
	<i>-aapiik</i>	<i>-ki'nix</i>
	<i>-tiween (~ -twe)</i>	<i>-yiin (~ -iin)</i>
K'iche'	<i>-b'e</i>	<i>chi</i>
Tandroy	<i>añ- -a (~ a- -añe, i- -a, i- -añe)</i>	<i>amy</i>
Maasai	<i>-ié</i>	<i>te</i>
Wolof	<i>-e</i>	<i>ag</i>
Rwanda	<i>-ho (~ -mo)</i>	<i>kw</i>
	<i>-iish</i>	<i>n' (~na)</i>
	<i>-an</i>	<i>n' (~na)</i>
	<i>-ir</i>	<i>ku, i, mu</i>
	<i>-er</i>	<i>cy'</i>
Swahili	<i>-i</i>	<i>kwa, kwa aj ili ja, kwen, kuwelekeə</i>
Herero	<i>-en</i>	<i>k'</i>
Kogi	<i>-a</i>	(possessive inflection)
	<i>-u</i>	<i>na</i>
	<i>-i</i>	<i>abakála-k</i>
Kashibo-Kakataibo	<i>-kun</i>	<i>=bëtan</i>
	<i>-xun</i>	<i>=kupi, =nan</i>
Shipibo-Konibo	<i>-kiin</i>	<i>-nin, betan</i>
Southeastern Tepehuan	<i>-idya</i>	<i>-javim</i>
Central Alaskan Yupik	<i>-ut</i>	(ablative inflection)
	<i>-uteke</i>	(ablative inflection)

	<i>-viki</i>	(allative inflection)
Bantik	<i>pa-</i>	<i>age?</i>
Javanese	<i>-i</i>	<i>karó, nganggo, menyang</i>
	<i>-aké</i>	<i>kanggó, nganggo</i>
Tukang Besi	<i>-ako</i>	<i>(ako,) kene</i>
	<i>-Vci</i>	<i>kua</i>
Kambera	<i>-ng</i>	<i>la</i>
Warrongo	<i>-riL⁽¹⁾</i>	<i>-ngka, -yi</i>
	<i>-riL⁽²⁾</i>	(different case markers)
Kalkatuungu	<i>-ncamaji</i>	<i>-ci</i>
Taba	<i>-k</i>	<i>pake, ada</i>
	<i>-o</i>	<i>untuk</i>
Mbuun	<i>-e</i>	<i>ɔ'ŋgirá</i>
rGyalrong	<i>Na-</i>	<i>-əčhes</i>
Kope	<i>Vm-</i>	<i>-toi, -doi</i>
Tariana	<i>-ne</i>	<i>-ta</i>
Thulung Rai	<i>-saʃ</i>	<i>-lai</i>
total: 30	total: 47	

As will be discussed in detail in 6.3.1.1.2 in Chapter 6, there is a possibility that the Ainu applicative prefix *e-* immediately comes from the postposition *e*. However, examples suggesting its postpositional usage are very scarce, and it is deemed that the postposition became obsolete, rendering the paraphrase difficult.

(163) Ainu (isolate; Japan)

- a. *kamuiranke-tam* *shirka tanne teshpa kane*
 godgiven-sword bent long squid and
kutbok-e-chiu
 belt_below-at-arrange

‘The sword of the god gift is bent sharply into the spear squid and inserted under the obi, and...’

(Kannari & Kindaichi 1959: 153-154)

- b. *tek-e-kar* *inau* *ari*
 hand-with-make whittled_willow with
 ‘with hand-made pieces of whittled willow,’

(Kannari & Kindaichi 1959: 359)

A possibility is that *e-* was a fully-obligatory applicative marker during the time in which

there was no postpositions with similar meanings (of course, it is not completely deniable that the postposition *e* was being used well when the postpositions arose). It is notable that every case-marker (or adposition) that today can be used for paraphrase of *e*-applicative constructions (*ta*, *un*, and *ne*) has transparent histories: *ta* comes from the adverb *ta* (Kindaichi (1991 [1931]: 178-179), and *un* and *ne* come from the copulas *un* and *ne* respectively (Kindaichi 1991 [1931]: 89; Tamura 2020: 67). It appearing that none of these postpositions has undergone notable semantic changes at least after they became used as postpositions, it could be said that the originally fully-obligatory applicative marker *e-* was made optional by the rise of the postpositions out of the sources. The assumption that *e-* is older than the postpositions is also reflected in the polysemy of *e-*, a fact making *e-* a role-conditioned optional applicative marker (or a role-conditioned obligatory applicative marker) rather than a fully-optional applicative marker³⁹. Consequently, the Ainu applicative prefix *e-* likely falls into Pattern #op2. How the postposition *ta* can be replaced with the applicative prefixes *e-* or *o-* is illustrated in (164):

(164) Ainu (isolate; Japan)

- a. *poro cise ta horari*
big house at live

‘He lives in a big house.’ (Shibatani (1990; 1996)’s English translation)

(Chiri 1974: 90)

- b. *poro cise e-horari*
big house APPL-live

‘He lives in a big house.’ (Shibatani (1990; 1996)’s English translation)

(Chiri 1974: 90)

- c. *cise ‘or ta ‘e-‘ahun*
house inside in you-enter

‘You went into the house.’

(Tamura 1988: 15; 2020: 93)

- d. *cise ‘or ‘e-‘o-‘ahun*
house inside you-APPL-enter

³⁹ This classification of obligatoriness/optionality of applicativization will be discussed in Chapter 6.

‘You went into the house.’

(Tamura 1988: 15; 2020: 93)

As already discussed, if the applicative markers in Table 16 are developments from their semantically compatible case-marker (or adposition), and the historically unrelated semantically compatible case-marker (or adposition)s exhibited in Table 16 already existed when they developed in that way, the former case-marker (or adposition)s should be likely to be still existent as the latter do, which is not the case for the languages in Table 16. Thus, if such an applicative marker is of a case-marker (or adposition) origin, the unrelated case-marker (or adposition)s in Table 16 are likely to be later developments than their applicative counterparts. Such a scenario is actually connoted for some languages in Table 16, which are discussed below.

According to Lipkind (1945: 52), in Winnebago, the postposition *eja* originates from the adverb *e’ja*. From the observation that its semantically compatible applicative prefix *ho-* has no known origin, it seems more likely that the former is the later development and the applicative prefix was originally fully-obligatory, than the other way round.

According to Windy Harsiwi (personal communication, 2021), in Central Javanese, the preposition *karó* more normally means ‘and’, from which I suspect that it recently developed from the coordinate conjunction, and the preposition *kanggó* is normally used as a verb ‘to use’, seeming to me to suggest its origin from the verb. The transparencies of these historical scenarios make it possible to consider the case-marker (or adposition)s used as alternates of the applicative markers are newer than those applicative markers.

The scenario saying that such an applicative marker is not of a case-marker (or adposition) origin is more accommodated, since, if its source (e.g., verb or noun) has not developed a case-marker (or adposition) after developing the applicative marker, it nicely explains why the applicative marker does not have a cognate case-marker (or adposition). Cases in my sample in which an optional applicative marker reportedly may have a verbal or nominal origin and is only replaceable with a non-cognate case-marker/adposition are: Ainu *ko-* (Kindaichi 1991 [1931]: 275-276; Bugaeva 2010: 773-774), Nez Perce *-c’a* and *-oo* (~ *-uu*) (Rude 1991), and K’iche’ *-b’e*, (Lyle Campbell, personal communication, 2021). Moreover, it should be noted that no applicative markers in Table 16 are clearly of case-marker (or adposition) origins.

Thus, when an applicative marker has no related semantically compatible case-

marker (or adposition)s, the likelihood is that it comes from something different from case-marker (or adposition)s, like a verb or a noun. In such cases, however, how old are the unrelated semantically compatible case-marker (or adposition)s compared with their applicative counterparts is difficult to estimate. There could have been an older semantically compatible case-marker (or adposition) when the applicative marker emerged, and it was replaced by the preexistent one, while it is also possible that the latter one originally existed when it emerged. According to Lyle Campbell (personal communication, 2021), the K'iche applicative suffix *-b'e* is apparently a later grammaticalization than “most of the other verbal morphology”, but it is not certain whether it is later than the grammaticalizations of its non-related case-marker (or adposition) counterparts. Sometimes, applicative markers of verbal or nominal origins have no semantically compatible case-marker (or adposition)s at all, cognate or not. These are cases of “fully-obligatory applicative markers”, which will be discussed later in Chapter 6.

Illustrations of some applicative and case-marker (or adposition) pairs appearing in Table 16 are provided below.

In rGyalrong, the applicative prefix *na-* may encode a beneficiary role (165b), and a non-applicative benefactive marker is the postposition *-əčhes* (165a):

(165) rGyalrong (Sino-Tibetan; Sichuan)

- a. *wuʃo w-əpə-ma w-əčhes wastot na-pa-w*
 3SG 3S:GEN-father-mother 3S:GEN-for very PROG-do-3SG
 ‘He was doing very good for his parents.’

(Nagano 2018: 87)

- b. *wuʃo w-əndiʔ w-əčhes suwe ta-na-šmo*
 3SG 3SG:GEN-friend 3SG:GEN-for barley PST-APPL-rob
 ‘(They say that) he stole barley for his friend.’

(Nagano 2018: 118; 2021: 294)

Mbuun benefactive applicative constructions by *-e* as in (166b) can be paraphrased with the preposition *ɔ'ŋgírá* as in (166a). Etymologically, the decomposition of *ɔ'ŋgírá* is *ɔ'ŋ-gír á* (LOM NP9-body CONN), literally meaning ‘on the body of’ (Bostoen & Mundeke 2011: 187), and clearly not related with the applicative suffix *-e*:

(166) Mbuun (Niger-Congo; Democratic Republic of the Congo [DRC])

- a. *o-á-kón* *ó-te* *ɔ'ngirá* *máam*
SM1-PRS.PROG-plant NP3-tree for mother
'He is planting a tree for my mother.'

(Bostoen & Mundeke 2011: 187)

- b. *o-á-kónné* *ó-te* *máám*
SM1-PRS.PROG-plant.APPL NP3-tree mother
'He is planting a tree for my mother.'

(Bostoen & Mundeke 2011: 187)

5.2.3 Comparison of cognate-sustained optional applicative markers and non-cognate sustained optional applicative markers

Comparing Table 15 and Table 16, the following observations can be made:

First, it can be seen that the languages with cognate-sustained optional applicative markers outnumber the languages with merely non-cognate-sustained optional applicative markers. The same remark can be applied to the numbers of such applicative markers as well. However, this does not enable us to conclude that less than half of the applicative markers are not of case-marker (or adposition) origins, since some of the applicative markers in Table 16 also may have case-marker (or adposition) origins.

The second point is that the proportions of suffixes are significantly greater in Table 16 than in Table 15. This is consistent with the finding made in Chapter 4, in that, whereas an adposition may yield either an applicative prefix or an applicative suffix, a verb is more likely to yield an applicative suffix than an applicative prefix. Of course, this is based on the assumption that a good proportion of the applicative markers in Table 16 will have origins in something different from case-marker (or adposition)s, like verbs or nouns.

5.3 Toward diachronic explanations for optionality/obligatoriness/impossibility of promotion

Now, let us turn to the finer classification of optional applicativization according to obligatoriness/optionality/impossibility of promotion. This section is concerned with how to explain why promotion may be obligatory, optional, or impossible depending on the optional applicative marker. Finding an answer to this problem is not easy, because values

of obligatoriness/optionality/impossibility of promotion are not clarified for many languages. Therefore, in this section, I propose some tentative hypothesis based on available data. In 5.3.1, cognate-sustained optional applicative markers will be discussed. Then, in 5.3.2, non-cognate-sustained optional applicative markers will be discussed.

5.3.1 Optionality/obligatoriness/impossibility of promotion of cognate-sustained optional applicative markers

Let us examine with which frequencies cognate-sustained optional applicative markers have optional promotion and obligatory promotion.

The following examples are repetitions from Chapter 2, to illustrate here cognate-sustained optional applicative markers with obligatory promotion. First, in *Tukang Besi*, when the applicative suffix *-ako* is used (167b), the original argument governed by the preposition *ako* (167a) obligatorily undergoes flagging promotion, and Donohue (1999b) considers that *-ako* and *ako* are cognate.

(167) *Tukang Besi* (Malayo-Polynesian; Indonesia)

- a. *no-balu te bambai ako te porai-no*
 3R.S-buy CORE comb BEN CORE fiancée-3GEN
 ‘He bought a comb for his fiancée.’

(Donohue 2001: 221)

- b. *no-balu-ako te porai-no te bambai*
 3R.S-buy=APPL CORE fiancée-3.GEN CORE comb
 ‘He bought a comb for his fiancée.’

(Donohue 2001: 221)

In the same way, in *Katukina-Kanamari*, when the applicative prefix *katu-* is used as in (168b), the postposition *katu* cannot be used for the same argument as in (168a), and the two elements are cognate (Queixalós 2010):

(168) *Katukina-Kanamari* (Harákmbut-Katukinan; Amazonia)

- a. *hoki kariwa Poroya na=katu*
 talk non.Indian Poroya CASE=SOC.INST
 ‘The non-Indian is talking to Poroya.’

(Queixalós 2010: 41)

- b. *kariwa na=katu-hoki Poroya*
non.Indian CASE=APPL-talk Poroya
'The non-Indian is talking to Poroya.'

(Queixalós 2010: 42)

In Maricopa, according to Lynn Gordon (personal communication, 2022), the following is possible, in which the case suffix *-ly* and the cognate applicative prefix *ily-* 'co-occur for an identical argument:

(169) Maricopa (Yuman-Cochimí; Arizona)

- kwonho-ny-ly 'ayuu=vqor ily-'chaam*
absket-DEM-in fruit in-1/3-put
'I put the fruit in the basket.'

(Lynn Gordon, personal communication, 2022)

As discussed in 2.3.1.2.2 in Chapter 2, truly, two of the Ainu applicative prefixes, *e-* and *ko-*, are applicative markers with optional promotion, but it is unrelated postpositions like *ta* or *ne* rather than the postpositions *e* and *ko*, which appear when the promotion does not occur. This is thought to be related with the fact that the postpositions *e* and *ko* are probably quite obsolete, and it is even not certain that they really had established postpositional usages at some point. As for Amharic (Amberber 1997; 2000), as discussed in 2.3.1.1.1 in Chapter 2, although case-marking promotion is optional, person-marking promotion seems to be obligatory. However, because what we are interested in here is the relationship between applicative markers and case-marker (or adposition)s, I will stress the fact that the case-marking promotion is optional so that the applicative *-bb* may co-occur with the preposition *be*, and the applicative *-ll* may co-occur with the preposition *le*. As discussed in 2.3.1.1.1 in Chapter 2, the Warembori (Donohue 2003) *-na* applicativization must undergo either constituent order promotion or flagging promotion (this case will be further mentioned later).

Regarding all the remaining applicative markers listed in Table 15, it is considered that the flagging promotion is obligatory and no co-occurrence of the applicative marker with a cognate case-marker (or adposition) for an identical argument is possible. As mentioned in 2.3.1 in Chapter 2, I am acquainted with the fact that such a co-occurrence

has never been attested in Katukina-Kanamari, *Tukang Besi*, and *Koyra Chiini* through inquires to authors of the respective languages. Two of the Chechen-Ingush applicative prefixes, *chy-* and *t'y-*, are illustrated below with repeated examples from 2.3.1.2.1 in Chapter 2. They are counted as cases of obligatory promotion, in the sense that, based on Nichols (2011), when they co-occur with their cognate postpositions for identical arguments, it is because of lexicalization of the prefixes and the verbs ((170a) and (170b)), and when they do not, it is a real (grammatical) applicativization ((170d) and (170f)):

(170) Chechen-Ingush (Northeast Caucasian; North Caucasus)

- a. *cy=chy chy-dexkar txo*
 there=in in-D.put:PL.WP 1P.EX
 ‘That’s where they put us up.’
 (Nichols 2011: 413)
- b. *cysjk istuolaa=t’y wa=t’y-qossa-dalar*
 cat table.dat=on down=on-jump-D.INCP.WP
 ‘The cat jumped (down) onto the table (from someplace above).’
 (Nichols 2011: 414)
- c. *čajna ču šiekar tasan*
 tea-DAT in sugar sprinkle
 ‘Put sugar in tea.’
 (Nichols 1984: 193)
- d. *šiekar čaj-na ču-tasan*
 sugar-NOM tea-DAT in-sprinkle
 ‘Put sugar in tea.’
 (Nichols 1984: 193)
- e. *bierana t’e huma ju:xan*
 child-DAT on thing-NOM dress
 ‘Dress a child.’, ‘Get a child dressed.’
 (Nichols 1984: 193)
- f. *na:nas biera: kuoč t’a-ju:x*
 mother-ERG child-DAT shirt-NOM on-dress

‘The mother dresses the child in a shirt.’, ‘The mother puts a shirt on the child.’

(Nichols 1984: 193; Nichols 2011: 486)

Incorporating the information of whether the promotion is optional, obligatory, or impossible, Table 15 may be modified as Table 17:

Table 17. Cognate-sustained optional applicative markers, the sustaining case-marker/adpositions, and optionality/obligatoriness of promotion in their applicativization

Language	Applicative marker	Semantically compatible case-marker or adposition (not necessarily comprehensive)	Optionality/obligatoriness/impossibility of promotion in applicativization
Dakota	<i>ki-</i> (~ <i>kic'i-</i>)	<i>kic'i</i>	unknown (optional or obligatory)
	<i>a-</i>	<i>akan</i>	unknown (optional or obligatory)
	<i>e-</i>	<i>ekta</i>	unknown (optional or obligatory)
	<i>o-</i>	<i>ohna</i>	unknown (optional or obligatory)
Rama	<i>ba-</i>	<i>ba(ng)</i>	unknown (optional or obligatory)
	<i>yu-</i>	<i>u</i>	unknown (optional or obligatory)
	<i>ka-</i>	<i>ka(ng)</i>	unknown (optional or obligatory)
	<i>su-</i>	<i>su</i>	unknown (optional or obligatory)
	<i>yaa-</i>	<i>aa(k)</i>	unknown (optional or obligatory)
Maricopa	<i>ily-</i>	<i>-ly</i>	optional
	<i>k-</i>	<i>-k</i>	unknown (optional or obligatory)
	<i>nym-</i>	<i>-m</i>	unknown (optional or obligatory)
Katukina-Kanamari	<i>katu-</i>	<i>katu</i>	obligatory
	<i>ama-</i>	<i>ama</i>	obligatory
	<i>to-</i>	<i>ton</i>	obligatory
Chechen-Ingush	<i>chy-</i>	<i>chy</i>	obligatory
	<i>t'y-</i>	<i>t'y</i>	obligatory
Ainu	<i>e-</i>	<i>e (?)</i>	unknown (optional or obligatory)
	<i>ko-</i>	<i>ko (?)</i>	unknown (optional or obligatory)
Warembori	<i>-na</i>	<i>nana</i>	obligatory (constituent order promotion or flagging promotion)
	<i>-ta</i>	<i>ta</i>	unknown (optional or obligatory)
	<i>-tane</i>	<i>tana</i>	unknown (optional or obligatory)
Tukang Besi	<i>-ngkene</i>	<i>kene</i>	obligatory
	<i>-ako</i>	<i>ako</i>	obligatory
Koyra Chiini	<i>-nda</i>	<i>nda</i>	obligatory
Amharic	<i>-ll</i>	<i>lə-</i>	optional (person-marking promotion is obligatory)

	<i>-bb</i>	<i>bə-</i>	optional (person-marking promotion is obligatory)
Dholuo	<i>-e</i>	<i>e</i>	unknown (optional or obligatory)
	<i>-ni</i>	<i>ni</i>	unknown (optional or obligatory)
Yucatec Maya	<i>-t</i>	<i>ti</i>	unknown (optional or obligatory)
Rwanda	<i>-ho (~ -mo)</i>	<i>ho (~ mu)</i>	unknown (optional or obligatory)
Nez Perce	<i>-a'n</i>	<i>'ayn</i>	unknown (optional or obligatory)
Kipsigis	<i>-en</i>	<i>ɛ:n</i>	unknown (optional or obligatory)
total: 15	total: 33		(flagging promotion) obligatory: 8 / optional: 3 / impossible: 0 / unknown: 22 (promotion itself) Obligatory: 11 / optional: 3 / impossible: 0 / unknown: 21

Because the information of optionality/obligatoriness/impossibility of promotion in applicativization is scarcely provided in grammars, not many things can be known regarding how frequently cognate applicative marker and case-marker or adposition realize applicativization with optional or obligatory promotion. However, it may be possible to postulate why promotion is obligatory in Katukina-Kanamari, Tukang Besi, Koyra Chiini, and Chechen-Ingush. These languages have in common the following properties.

First, the applicative marker and the cognate case-marker (or adposition) have highly similar forms. Not every applicative marker listed in Table 17 has a cognate case-marker (or adposition) which is similar to it to that extent, see the Dakota and Rama ones for example.

Second, if the promotion is optional, and the applicative marker and the cognate case-marker (or adposition) co-occur, they can be adjacent with each other, if there is no intervening constituent and if no word order promotion occurs. This is never the case in Amharic, in which the promotion is optional, and is typical in Koyra Chiini. As seen from (171a) and (171b), in Koyra Chiini, the applicative marker is a suffix, the adposition is a preposition, and the prepositional phrase follows the verb, with a fixed order. Thereby, the applicative *-nda* and the preposition *nda* would in many cases be adjacent with each other if they occurred together.

(171) Koyra Chiini (Nilo-Saharan; Mali)

- a. *yee hima-nda a se haysi*
1SG.S.IMPF resemble 3SG DAT dog
'I resemble a dog for him (=from his point of view)'

(Heath 1999: 137)

- b. *bere ni nda cirow!*
transform 2SG.O with bird
'Turn yourself into a bird!'

(Heath 1999: 165)

In the *-na* applicativization in Warembori, whose illustration is brought below from 2.3.1.1.1 in Chapter 2, the only requirement is that either constituent order promotion (172c) or flagging promotion (172b) would occur, and when it is constituent order promotion that occurs, flagging promotion is suppressed (172c). However, the applicative suffix *-na* and the preposition *nana* are not adjacent with each other due to the constituent order promotion. This fact is also compatible with the assumption discussed here.

(172) Warembori (Lower Mamberamo; Papua)

- a. *iwi on-do nana karapesa*
1SG sit-IND OBL chair
'I sat on a chair.'

(Donohue 1999a: 36)

- b. *iwi o(n)-na karapesa*
1SG sit-APPL chair
'I sat on the chair.'

(Donohue 1999a: 36)

- c. *nana karapesa iwi o(n)-na*
OBL chair 1SG sit-APPL
'I sat on a chair.'

(Donohue 1999a: 36)

Those two properties point to the plausibility that the applicative markers in Katukina-Kanamari, Tukang Besi, Koyra Chiini, and Chechen-Ingush are recent developments from the case-marker (or adposition)s (for the Koyra Chiini case, see

Peterson (2007: 178) as well). Thus, in each of these cases, the applicative marker and the case-marker (or adposition) are similar both in their forms and positions, so that it is still difficult to distinguish the two usages of the virtually single form. Co-occurrence of them will be felt merely redundant, or, as Jeffrey Heath (personal communication, 2021) suggests regarding Koyra Chiini, will be only realized when the speaker makes a pause in utterance at best.

This reasoning predicts that other applicative markers whose cognate case-marker (or adposition)s are highly similar to them in forms could have obligatory case-marking promotion as well.

5.3.2 Optionality/obligatoriness/impossibility of promotion of non-cognate-sustained optional applicative markers

Now, let us examine with which frequencies non-cognate-sustained optional applicative markers have optional promotion and obligatory promotion.

In what follows, some examples in Chapter 2 are repeated, to illustrate non-cognate-sustained optional applicative markers with obligatory promotion. First, as discussed in 2.3.1.2.1 in Chapter 2, Javanese applicativization by *-ake* causes flagging promotion obligatorily, using apparently non-related prepositions like *kanggo*:

(173) Javanese (Malayo-Polynesian; Java)

- a. *Ani n-ulis layang kanggo Tono*
 Ani AV-write letter for Tono
 ‘Ani wrote a letter for Tono.’

(Nurhayani 2012: 3)

- b. *Ani n-ulis-ake Tono laying*
 Ani AV-write-APPL Tono letter
 ‘Ani wrote Tono a letter.’

(Nurhayani 2012: 3)

Likewise in K’iche’, when the instrumental applicative marker *-b’e* is used (174b), flagging promotion is obligatory, and the instrumental preposition *č̣i* used in a non-applicative version (174a) is apparently unrelated with *-b’e*.

(174) K'iche' (Mayan; Guatemala)

- a. *š-at-in-č'ay* *č'i* *če:ʔ*
ASP-2SG.ABS-1SG.ERG-hit with wood
'I hit you with a stick.'

(Campbell 2000: 278)

- b. *če:ʔ* *š-ø-in-č'aya-b'e-x* *a:w-e:h*
wood ASP-3SG.ABS-1SG.ERG-hit-INSTR-TR 2SG.POSS-GEN
'I used a stick to hit you.'

(Campbell 2000: 278)

The following examples, in turn, are repetitions from Chapter 2 to illustrate non-cognate-sustained optional applicative markers with optional promotion. First, in Ainu, regarding the applicative prefix *ko-* and the semantically compatible historically unrelated postposition *ta*, (175b) underwent promotion, in that *ta* does not appear as in (175a), while (175c) did not, in that *ta* still appears despite the presence of *ko-* for the very governed terms of *ta*:

(175) Ainu (isolate; Japan)

- a. *cise* *'or* *ta* *'e-'ahun*
house inside in you-enter
'You went into the house.'

(Tamura 1988: 15; 2020: 93)

- b. *abunno* *ainu* *kotan* *e-ko-hosibi* *kusu*
calmly human village you-APPL-return therefore
'because you peacefully go back to the human's village,'

(Kannari & Kindaichi 1964: 137)

- c. *chikupsho-pa* *ta* *chikupsho-kash* *ta* *hayok* *numikir* *ko-kinnatara*
mat-top at mat-end at armor group APPL-sit_well
'The armor corps are dressed up gorgeously seated on both top and end of the mat.'

(Kannari & Kindaichi 1964: 206)

In a similar way, in Taba, two prepositions are reported that can substitute the applicative suffix *-ko* (176c): *ada* (176a) and *pake* (176b), but *-ko* does not always suppress the use

of them with regard to an identical argument ((176d) and (176e)), and it is apparently cognate with neither.

(176) Taba (Malayo-Polynesian; Indonesia)

- a. *Oci nliko manik **ada** sapatu*
*Oci n-liko manik **ada** sapatu*
 Oci 3SG=tread.on chicken with shoe
 ‘Oci trod on the chicken with his shoe.’

(Bowden 1997: 378)

- b. *Oci nliko manik **pake** sapatu*
*Oci n-liko manik **pake** sapatu*
 Oci 3SG=tread.on chicken INST shoe
 ‘Oci trod on the chicken with his shoe.’

(Bowden 1997: 378)

- c. *Oci nlikok manik sapatu*
Oci n=liko-k manik sapatu
 Oci 3SG=tread.on-APPL chicken shoe
 ‘Oci trod on the chicken with his shoe.’

(Bowden 1997: 241,378)

- d. *Oci nlikok manik **ada** sapatu*
*Oci n=liko-k manik **ada** sapatu*
 Oci 3SG=tread.on-APPL chicken with shoe
 ‘Oci trod on the chicken with his shoe.’

(Bowden 1997: 379)

- e. *Oci nlikok manik **pake** sapatu*
*Oci n=liko-k manik **pake** sapatu*
 Oci 3SG=tread.on-APPL chicken INST shoe
 ‘Oci trod on the chicken with his shoe.’

(Bowden 1997: 379)

Finally, the following examples from Chapter 2 are repeated to illustrate non-cognate-sustained optional applicative markers with no promotion option, from Thulung Rai and Tariana, in which the applied arguments are never core arguments: the dative case

suffix *-lai* and the instrumental case suffix *-ne* must be used even when the argument is applicativized ((177b) and (178b)), like when it is not ((177a) and (178a)):

(177) Thulung Rai (Sino-Tibetan; Nepal/India)

- a. *go beno-lai ghas phɔl-dzʉl-to-m bu*
 1SG ox-DAT N.grass cut-PON-1SG/3.PST-NOM be.3SG

‘I have cut the grass for the ox (but will give it to him later).’

(Lahaussois 2002: 222)

- b. *go oram nem a-lwak-lai qi-saŋ-puʔ*
 1SG this house 1POSS-y.brother-DAT leave-BEN-1SG/3SG

‘I leave this house to my brother.’

(Lahaussois 2002: 213)

(178) Tariana (Arawakan; Amazonia)

- a. *ne itawhya-ne di-uka di-rahta*
 then canoe-INST 3SG.NF-arrive 3SG.NF-sail

‘Then he went by canoe.’

(Aikhenvald 2003: 152)

- b. *i-na pa-hya-nipe-ne-ka nu-wape-ta nuhua*
 2PL-OBJ IMP-eat-NOMZR-INS-DECL 1SG-wait+CAUS1-CAUS2 I

‘I am working for you with food.’ or ‘I have waited for you with food (lit., with something to eat)’.

(Aikhenvald 2003: 238)

Based on this three-way classification, Table 18 is gained as a modification of Table 16. The result shows that, also in cases in which case-marker (or adposition) counterparts are unrelated elements with the applicative markers, promotion in applicativization can be optional, obligatory, or impossible.

Table 18. Non-cognate-sustained optional applicative markers, the sustaining case-marker/adpositions and optionality/obligatoriness/impossibility of promotion in their applicativization

Language	Applicative marker	Semantically compatible case-marker or adposition (not necessarily comprehensive)	Optionality/obligatoriness/impossibility of promotion in applicativization
Ainu	<i>e-</i>	(<i>e</i> (?),) <i>ta, ne, un</i>	optional
	<i>ko-</i>	(<i>ko</i> (?),) <i>ta, ne, un</i>	optional
	<i>o-</i>	<i>ta</i>	unknown (optional or obligatory)
Kolyma Yukaghir	<i>-re</i>	<i>-ge</i>	obligatory
	<i>-ri</i>	<i>-in</i>	obligatory
Rawang	<i>-a</i>	<i>dvpvt</i>	case-marking promotion is impossible (person-marking promotion is obligatory)
Georgian	<i>i-</i>	<i>-isatvis</i>	unknown (optional or obligatory)
	<i>a-</i>	<i>-ze</i>	unknown (optional or obligatory)
Winnebago	<i>ho-</i>	<i>-eja</i>	unknown (optional or obligatory)
Nez Perce	<i>-c'a</i>	<i>-pa</i>	unknown (optional or obligatory)
	<i>-oo (~ -uu)</i>	<i>-pe</i>	unknown (optional or obligatory)
	<i>-aapiik</i>	<i>-ki'nix</i>	unknown (optional or obligatory)
	<i>-tiween (~ -twe)</i>	<i>-yiin (~ -iin)</i>	unknown (optional or obligatory)
K'iche'	<i>-b'e</i>	<i>chi</i>	obligatory
Tandroy	<i>añ- -a (~a- -añe, i- -a, i- -añe)</i>	<i>amy</i>	unknown (optional or obligatory)
Maasai	<i>-ié</i>	<i>te</i>	optional
Wolof	<i>-e</i>	<i>ag</i>	optional
Rwanda	<i>-iish</i>	<i>n' (~na)</i>	unknown (optional or obligatory)
	<i>-an</i>	<i>n' (~na)</i>	optional
	<i>-ir</i>	<i>ku, i, mu</i>	optional
	<i>-er</i>	<i>cy'</i>	unknown (optional or obligatory)
Swahili	<i>-i</i>	<i>kwa, kwa aj ili ja, kwen, kuwelekeā</i>	optional
Herero	<i>-en</i>	<i>k'</i>	optional
Kogi	<i>-a</i>	(possessive inflection)	optional
	<i>-u</i>	<i>na</i>	optional
	<i>-i</i>	<i>abakála-k</i>	optional
Kashibo-Kakataibo	<i>-kun</i>	<i>=bētan</i>	unknown (optional or obligatory)
	<i>-xun</i>	<i>=kupí, =nan</i>	unknown (optional or obligatory)

	<i>-kiin</i>	<i>-nin, betan</i>	optional
Southeastern Tepehuan	<i>-idya</i>	<i>-javim</i>	unknown (optional or obligatory)
Central Alaskan Yupik	<i>-ut</i>	(ablative inflection)	unknown (optional or obligatory)
	<i>-uteke</i>	(ablative inflection)	unknown (optional or obligatory)
	<i>-viki</i>	(allative inflection)	unknown (optional or obligatory)
Bantik	<i>pa-</i>	<i>age?</i>	unknown (optional or obligatory)
Javanese	<i>-i</i>	<i>karó, nganggo, menyang</i>	obligatory
	<i>-aké</i>	<i>kanggó, nganggo</i>	obligatory
Tukang Besi	<i>-ako</i>	<i>(ako,) kene</i>	obligatory
	<i>-VCi</i>	<i>kua</i>	obligatory
Kambera	<i>-ng</i>	<i>la</i>	optional
Warrongo	<i>-riL⁽¹⁾</i>	<i>-ngka, -yi</i>	Obligatory
	<i>-riL⁽²⁾</i>	different case markers	unknown (optional or obligatory)
Kalkatuungu	<i>-jcamaji</i>	<i>-ci</i>	unknown (optional or obligatory)
Taba	<i>-k</i>	<i>pake, ada</i>	optional
	<i>-o</i>	<i>untuk</i>	optional
Mbuun	<i>-e</i>	<i>ɔ'ngirá</i>	optional (impossible for the location role)
rGyalrong	<i>na-</i>	<i>-ə̀ches</i>	unknown (impossible or optional)
Kope	<i>Vm-</i>	<i>-toi, -doi</i>	unknown (optional or obligatory)
Tariana	<i>-ne</i>	<i>-ta</i>	impossible
Thulung Rai	<i>-saʔ</i>	<i>-lai</i>	impossible
total: 30	total: 47		(flagging promotion) obligatory: 9 / optional: 16 / impossible: 2 / unknown: 20 (Promotion itself) obligatory: 9 / optional: 16 / impossible: 2 / unknown: 20

In 5.3.1 above, I attributed the obligatoriness of promotion in the cases of Koyra-Chiini, Katukina-Kanamari, Chechen-Ingush, and Tukang Besi, to the youth of the applicative markers, making the distinction difficult between them and their original case-marker (or adposition)s. This means that, once an applicative marker is well grammaticalized, and it can well be differentiated from its original case-marker (or adposition), the promotion in applicativization may become optional. Notably, this idea

is compatible with the observation that, according to comparison of Table 17 and Table 18, both optional promotion and impossible promotion are more general for non-cognate-sustained cases than cognate-sustained cases. Particularly, impossible promotion is only attested for the former, that is, there is no case in which cognate-sustained applicative marker and the cognate case marker or adposition never cause promotion. Optional promotion is confirmed for 3 applicative markers of the total 33 applicative markers in Table 17 (circa. 9.1%)⁴⁰ and for 16 applicative markers of the total 47 applicative markers in Table 18 (circa. 34.0%)⁴¹.

Finally, Yasugi (2003) describes the shift from obligatoriness to impossibility of promotion in *-b'e* instrumental applicativization in Kaqchikel (which is not among my sample languages). Consider the examples below. In modern Kaqchikel, the preposition *r-ik'in* is essential in (179a) and (179b), irrespective of whether the instrumental applicative suffix *-b'e* is present or not. Note that in (180b) there is a constituent order promotion *r-ik'in jun machät* 'with a machete' underwent. Yasugi (2003: 90) states that the impossibility of flagging promotion is a novel phenomenon, not observed in other Mayan languages including K'iche', Classical Yucatec, and Ixil (Mayan; Guatemala) (in which corresponding flagging promotions are obligatory), and that, in the future, the applicative *-b'e* could be abandoned at all.

(179) Kaqchikel (Mayan; Guatemala)

- a. *x-0-u-choy(b'e-j) r-ik'in jun machät*
 T-B3-A3-cut-I-M A3-with a machete
 'He cut it with a machete.'

(Dayley 1981: 27, cited in Yasugi 2003: 90)

- b. *r-ik'in jun machät x-i-ru-sok-b'e-j*
 A3-with a machete T-B1-A3-wound-I-PS

⁴⁰ If, the cases of *-na* in Warembori and *chy-* and *t'y-* in Chechen-Ingush, which are controversial as discussed in 5.3.1 are also counted, the result is 18.2%.

⁴¹ Although there is a possibility that the Ainu prefixes *e-* and *ko-* may originate from and be replaceable with the postpositions *e* and *ko*, the replacing would be rather rare if it is possible at all. If this is taken into account, the difference between becomes more conspicuous.

‘With a machete I was wounded.’

(Dayley 1981: 27, cited in Yasugi 2003: 90)

I suppose that, for the flagging promotion, there might have been the optionality stage between the obligatoriness and impossibility stages. Based on the hypothesis made here, it is possible to consider that the shift was possible because the applicative suffix *-b'e* and the semantically compatible preposition *r-ik'in* are formally rather different and never occur adjacently. I suppose that it is difficult for an applicative marker with optional promotion or no promotion option to be back to obligatory promotion, because, if they are seen as well-differentiated markers, there will not be a good reason to remove it when the compatible applicative marker also occurs.

5.3.3 Summary

In 5.3.1, the hypothesis was proposed that incipient applicative markers are so similar both semantically and formally to adpositions out of which they developed that their co-use is generally avoided, particularly when they occur in a similar position.

In 5.3.2, examining how optionality, obligatoriness, and impossibility of promotion are distributed among optional applicative markers which are replaceable with non-related case-marker (or adposition)s ended up providing a further support for the hypothesis made in 5.3.1. It was also suggested that the shifts of “obligatoriness > optionality” or “obligatoriness > impossibility” of promotion in optional applicativization could be unidirectional, it being difficult to explain hypothetical situations where optional promotion and impossible promotion become obligatory promotions.

In future studies, these claims need to be examined with more languages.

6 Obligatory applicativization

The present chapter's topic will be the categories which are found under the label of obligatory applicativization in Table 19, a repetition of Table 14 in the beginning of Chapter 5:

Table 19. Types of applicativization in terms of optionality/obligatoriness of applicativization and optionality/obligatoriness/impossibility of promotion

Optional applicativization (paraphrase is possible)			Obligatory applicativization (both promotion and paraphrase are impossible)		
with obligatory promotion	with optional promotion	with no promotion option	fully-obligatory	conditionally-obligatory	
				role-conditioned / feature-conditioned	base-conditioned
grammatical applicativization				lexical applicativization	
				deponent	non-dep.

6.1 Introductory remarks

In Chapter 2, three types of applicativization were identified according to the optionality, obligatoriness, and impossibility of promotion of the applied argument. The third type, namely applicativization with no promotion option, was discussed in terms of how it is a possible pattern of optional applicativization with examples from Thulung Rai, Tariana, rGyalrong, and Mbuun in 2.3.1.2.3 in Chapter 2. However, as discussed in 2.5, applicativization for which promotion is never visible is not confined to the cases of optional applicativization of this kind, but is applicable for every case of obligatory applicativization. The examples of obligatory applicatives cited in 2.5 in Chapter 2 are repeated here:

(180) Southern Sierra Miwok (Yok-Utian; California)

ʔenyh-ka-ni

make-him-for

‘Make it for him!’

(Broadbent 1964: 75)

(181) Barupu (Skou; Papua New Guines)

a. *k-o-vovo*

R-3SG.F-circle

‘She circled.’

(Donohue 2003: 122)

b. *k-o-vovo-ya-i*

R-3SG.F-circle-above-3PL.M

‘She circled above them.’

(Donohue 2003: 122)

Figure 1 in Chapter 2 is repeated below, to show the relationship among the types of applicativization I distinguish based on optionality and obligatoriness of applicativization and of promotion:

To date, obligatory applicativization received much attention in both descriptions of particular languages and typological literature as one of the important parameters yielding the cross-linguistic diversity of applicative constructions. Different authors describe by different terminologies the dichotomy of applicative constructions which can be paraphrased by non-applicative means and those which cannot: “dynamic applicatives vs. nondynamic applicatives” (Donohue: 1999b; 2003), “canonical applicatives vs. non-canonical applicatives” (Creissels 2006), optional applicatives vs. obligatory applicatives (Peterson 2007), applicatives vs. quasi-applicatives (Dixon 2012), and applicatives vs. pseudo-applicatives (Pacchiarotti 2017). It can be seen that most of the labels used for obligatory applicatives indicate some kind of departure from the core of the genuine applicatives.

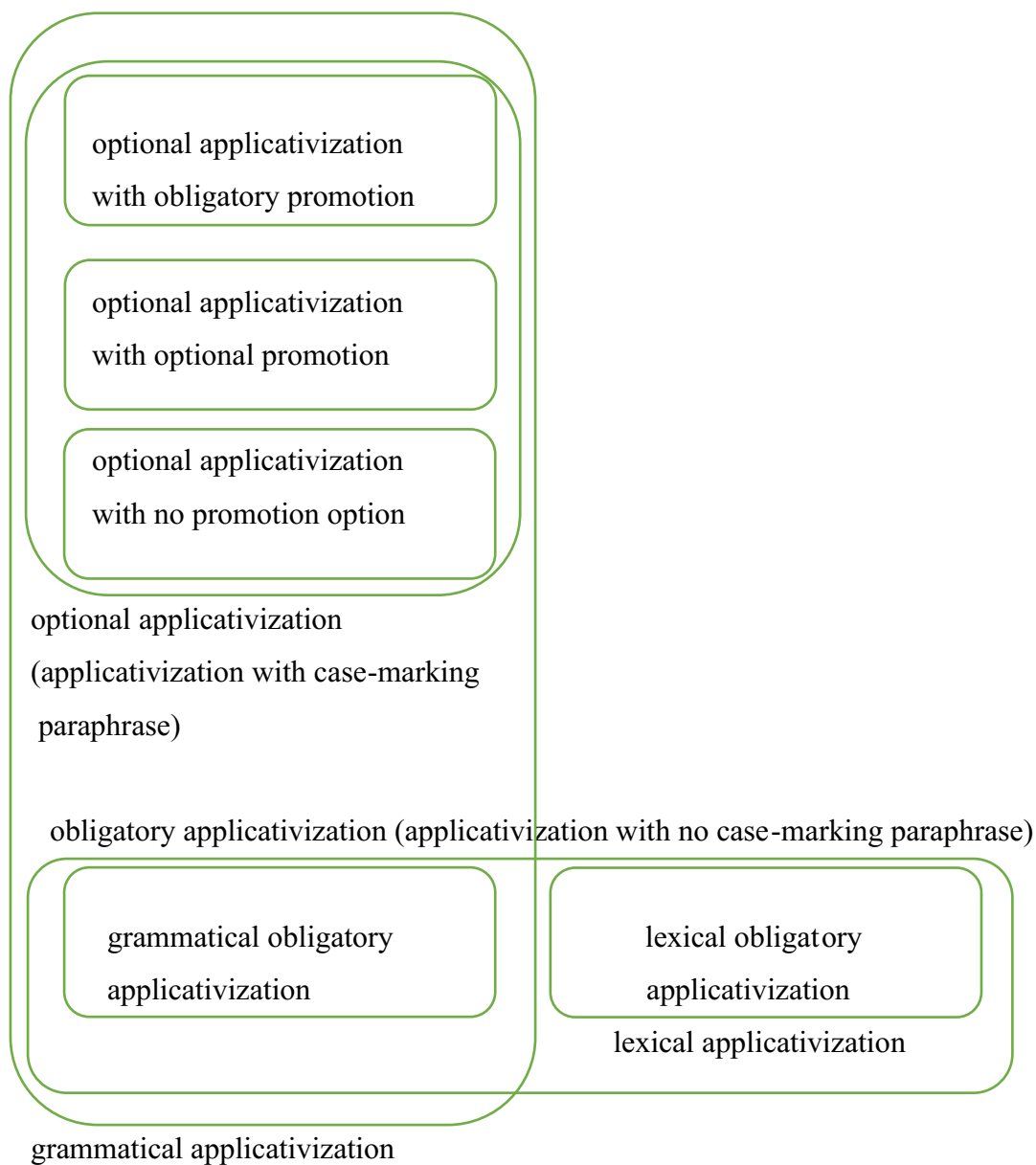


Figure 10. Types of optional and obligatory applicativization and their relationship

In that way, obligatory applicativization itself enjoys frequent mentions in literature. However, in many cases, all that is done is mentioning the fact that some languages have obligatory applicative constructions, and studying meticulously the typology of obligatory applicativization, in contrast, was generally refrained from. Its main reason is that, as Peterson (2007: 51) and Dixon (2012: 300) point out, in many cases, grammars of languages which have applicative constructions do not provide any information of

optionality or obligatoriness of the applicativization at all (although some do provide more or less detailed descriptions including ones concerning under which conditions applicativization is obligatory or optional). Peterson (2007: 45-51) is an exceptional typological study, in that it goes beyond a purely descriptive level to even discusses different conditions that are responsible for obligatoriness of applicativization. However, as will be shown later, Peterson's analysis alone is still not sufficient when one wants to make a fine and comprehensive classification of possible types obligatory applicativization.

Besides, I believe that the difficulty suggested in Creissels (2006), Peterson (2007), and Dixon (2012) with which to determine whether to admit grammatical obligatory applicative constructions as applicative constructions or not can be reduced to the fact that obligatory applicative constructions are conceptually close to lexicalized applicative constructions, or in some cases are located in the intermediate stage between optional applicative constructions and lexicalized applicative constructions. Peterson (2007: 51) even includes lexicalized applicative constructions in obligatory applicative constructions.

However, they do not note the fact that obligatoriness and lexicality of applicative constructions have different degrees in different cases. Thus, as will be elaborated later, I distinguish grammatical obligatory applicativization and lexical obligatory applicativization and consider that the former is counted as a type of prototypical applicativization while the latter is not.

I will first of all propose to classify applicative markers according to the observation that there is a varying degree to which applicative markers are optional or obligatory. Then, diachronic processes will be discussed by which each type of diachronic sources (adposition, verb, etc.) ends up as an applicative marker with respective degrees of optionality or obligatoriness, based on information or hypothesis about from what source each applicative marker derives.

I will discuss grammatical obligatory applicativization first and then lexical obligatory applicativization. For each, further subtypes will be distinguished.

For each type of obligatory applicativization, available information in the literature will be used to detect which language in my sample has which type of obligatory applicativization. However, note that some languages in my sample have applicative markers whose optionality and obligatoriness are not clarified from the literature, so they

will not receive major treatments and will be briefly mentioned 6.2.1.1.5.

There are largely four possible situations I distinguish in which the applicativization is obligatory. The four situations are summarized below:

(182) Four situations realizing obligatory applicativization

(a) situations in which the applicative marker does not have a semantically compatible case-marker (or adposition) in that language

(b) situations in which, the applicative marker has a semantically compatible case-marker (or adposition) in that language, and a verb yielding a compositional meaning when combined with that applicative marker yields an ungrammatical or a less natural sentence when combined with the case-marker (or adposition)

(c) situations in which, although the applicative marker has a semantically compatible case-marker (or adposition) in that language, the combination of a verb and the applicative marker yields a more or less idiomatic meaning which cannot be expressed by the combination of the verb and a case-marker (or adposition)

(d) situations in which the base verb cannot be used independently or is not existent (anymore) in that language

What is common among the four situations is that, in each, the applicativization is the only means for expressing that meaning in that language. As will be discussed in detail later, the situations depicted in (181a), (181b), (181c), and (181b) correspond with so-called obligatory applicativization, and the situations depicted in (181c) and (181d) correspond at the same time with lexical applicativization resulting from historical lexicalization of applicative constructions. Therefore, roughly speaking, non-optional applicativization consists of the two subcategories: obligatory applicativization (precisely speaking, grammatical obligatory applicativization) and lexical applicativization. In the present chapter, the four types will be discussed in detail.

6.2. Classification

6.2.1 Grammatical obligatory applicativization

First of all, as introduced in 6.1, I divide grammatical obligatory applicativization into the two subcategories: obligatory applicativization due to the absence of a

semantically compatible case-marker (or adposition) (situations A) and grammatical obligatory applicativization despite the presence of a semantically compatible case-marker (or adposition) (situations B), a division made by no previous literature, including the above-mentioned literature like Creissels (2006), Peterson (2007), and Dixon (2012). In what follows, detailed description and subclassification of the two situations.

6.2.1.1 Situations A: Grammatical obligatory applicativization due to the absence of a semantically compatible case-marker (or adposition)

The type of obligatory applicativization to be discussed here is concerned with the situations (182a) depicted in 6.1.:

(a) situations in which the applicative marker does not have a semantically compatible case-marker (or adposition) in that language.

Applicative constructions formed by the applicative markers in those situations cannot have non-applicative counterparts under any conditions, since there is no non-applicative means in that language to fulfil that role in the first place. In that sense, I call such applicative markers “fully-obligatory applicative markers”. Those situations are found in some languages in my language sample.

6.2.1.1.1 Southern Sierra Miwok

In Southern Sierra Miwok, according to Freeland (1951: 24), there is no dative case or indirect object, and the benefactive relation is only expressed by means of something I analyze as applicative markers. This suggests that the following applicativized verbs cannot be paraphrased by a non-applicative means:

(183) Southern Sierra Miwok (Yok-Utian; California)

a. *ʔenyh-ka-na*

‘He made it for him.’

(Broadbent 1964: 75)

b. *ʔenyh-ka-ni*

make-him-for
'Make it for him!'

(Broadbent 1964: 75)

- c. *kalaŋ-nY* (*kala-ŋ* 'to dance')
'to dance for'

(Broadbent 1964: 76)

6.2.1.1.2 Barupu

Donohue (2003: 114) suggests that every case of Barupu applicativization is obligatory applicativization, forming “nondynamic applicative constructions” in his terminology. So, it seems that the Barupu applicative markers are fully-obligatory applicative markers, there existing no semantically compatible case-marker (or adposition)s. Below are examples:

(184) Barupu (Skou; Papua New Guines)

- a. *k-o-vovo*
R-3SG.F-circle
'She circled.'

(Donohue 2003: 122)

- b. *k-o-vovo-ya-i*
R-3SG.F-circle-above-3PL.M
'She circled above them.'

(Donohue 2003: 122)

- c. *bio=venavena k-o-ke-i pita*
woman=witch R-<3SG.F>-sit down
'The witch sat down.'

(Donohue 2003: 123)

- d. *bio=venavena k-o-ke-ta ai*
woman=witch R-<3SG.F>-sit-on tree
'The witch sat on a log.'

(Donohue 2003: 123)

6.2.1.1.3 Shipibo-Konibo

Of the Shipibo-Konibo three applicative suffixes, *-xon* and *-(V)naan* (~ *-(V)n*) are

obligatory applicative markers (Valenzuela 2010). In particular, judging from Valenzuela (2010), both of them seem to be fully-obligatory applicative markers as the present study defines. With regard to *-xon*, illustrated in (185a), Valenzuela (2010: 115) mentions that “complements of interest, possessive pronouns, and reason-marked NPs yielded ungrammatical sentences”. As for *-(V)naan* (~ *-(V)n*), illustrated in (185b), Valenzuela (2010: 125) mentions, in relation to the oblique *-ki*, that “all attempts to obtain nonapplicative malefactive constructions with an NP-*ki* sequence have been unsuccessful”.

(185) Shipibo-Konibo (Panoan; Peru/Brazil)

- a. *nokon bake-n-ra e-a kinan-xon-ke*
 POS1 child-ERG-EV 1-ABS vomit-xon-CMPL
 ‘My child vomited (to my benefit/detriment).’

(Valenzuela 2010: 111)

- b. *maxokan-ra e-a atapa kene-nan-ke*
 opossum:ERG-EV 1-ABS chicken:ABS fail-nan-CMPL
 ‘The opossum failed (to catch) my chicken (to my benefit).’

(Valenzuela 2010: 119)

6.2.1.1.4 Nahuatl

According to Andrews (1975), Classical Nahuatl lacks both the category “adpositions” and morphological case-marking. If it is true, the Classical Nahuatl applicative markers cannot avoid being obligatory, since applicative markers would be the only means for grammatically expressing certain relations. However, it should be noted that the category some Nahuatl linguists consider as “relational nouns” (e.g., Andrews 2003) seems to have adpositional (postpositional) properties as well (for more about this problem, see Sasaki (2011)). The assumption that *pan* in (186c) below is a relational noun rather than a postposition seems to be based on the observation that the pronoun *to* is in a possessive form, and *pan* is the possessee receiving its modification, the structure thereby being composed of a modifier and a head noun, rather than a governed term and a postposition. If the relational nouns are actually postpositions, (186c) would be regarded as an employment of a postposition in lieu of an applicative marker, in which case the applicativization is not obligatory but optional.

(186) Classical Nahuatl

- a. *a k-u-ai*
rain R-3SG.F-rain
'It's raining.'

(Andrews 1975: 122)

- b. *a k-u-ai-ke-ni*
rain R-3SG.F-rain-upon-1SG.F
'It's raining on me.'

(Andrews 1975: 122)

- c. *to-pan quiyau-h*
1PL.POSS-on rain-PSR
'It rained on us.'

(Launey 2011, cited in Pynes 2017: 68)

It seems to me that Classical Nahuatl is on the way of developing postpositions from relational nouns, but it is difficult for me to assess to what degree the grammaticalization has progressed and which interpretation is rather appropriate regarding the status of the forms. In that regard, I locate this Nahuatl case as an intermediate case between the obligatory and optional applicativizations. In other words, Nahuatl would be in a transition stage moving from obligatory applicativizations to optional applicativizations, by directing what was originally relational nouns proper toward the new class that could be recognized as postpositions. For the purpose of the present study, however, I count the Classical Nahuatl case as a fully-obligatory applicativization.

6.2.1.1.5 Other candidates for fully-obligatory applicative markers

There are applicative markers whose obligatoriness and optionality I could not figure out after resorting to available means. Applicative markers which were not discussed here but could actually be fully-obligatory applicative markers in my sample include the following for example.

Zariquiey Biondi (2018) provides no example of non-applicative paraphrase of *-anan* (~ *-naan*) applicative constructions in Kashibo-Kakataibo, and the Shipibo-Konibo apparently related suffix *-naan* is a fully-obligatory applicative marker, as discussed

above. From these two facts, it is possible that *-anan* is a fully-obligatory applicative marker.

It can be learned from Craig & Hale (1988) that, in Winnebago, inessive applicativization by the prefix *-hu* (~ *-ho*) may be paraphrased by means of the postposition *eja*. However, I have no means to know whether such paraphrase is possible for applicativization by the other applicative markers.

I will put these cases aside, as I am not certain about obligatoriness of those applicative markers.

6.2.1.2 Situation B: obligatory applicativization despite the presence of a semantically compatible case-marker (or adposition)

The type of obligatory applicativization to be discussed here is concerned with the situations (182b) depicted in 6.1.:

(b) situations in which, the applicative marker has a semantically compatible case-marker (or adposition) in that language, and a verb yielding a compositional meaning when combined with that applicative marker yields an ungrammatical or a less natural sentence when combined with the case-marker (or adposition).

To know that a resulting case-marking counterpart is ungrammatical, it is necessary that there exists a semantically compatible case-marker (or adposition). That a semantically compatible case-marker (or adposition) exists suggests that paraphrase of an applicative construction with an applied argument of that semantic role should be possible or grammatical at least under some conditions. Consequently, if there exists a case-marker (or adposition) semantically compatible with that applicative marker in that language, applicativization is obligatory under some (or no) conditions but is optional under other conditions. For that reason, I will call applicative markers which are in this situation “conditionally-obligatory applicative markers”, to be contrasted with “fully-obligatory applicative markers” defined above.

Conditions determining optionality and obligatoriness of such applicative markers can by large divided into semantic roles, classificatory feature of the noun, and base verbs, so that different conditionally-obligatory applicative markers have different kinds of

conditions. Peterson (2007: 45-51) already noticed this three-way distinction, but, as will be discussed later, he does not go further to capture it more systematically from a broader perspective in relation to other types of applicativization. I will call the three types of conditionally-obligatory applicative markers thus distinguished “role-conditioned obligatory applicative markers”, “feature-conditioned obligatory applicative markers”, and “base-conditioned obligatory applicative markers”, according to the kind of the condition. Each will be discussed and illustrated in what follows.

6.2.1.2.1 Role-conditioned obligatory applicative markers

An applicative marker which are equipped with multiple meanings for its applied arguments (“multiple-meaning applicative marker” defined in Chapter 3) may function as an optional applicative marker for some semantic roles and function as an obligatory applicative marker for other semantic roles. This phenomenon is also discussed by Peterson (2007: 46-48) in a typological term, with examples from some languages including Tzotzil, in which a recipient argument undergoes obligatory applicativization and a beneficiary argument undergoes optional applicativization, seemingly with an identical applicative marker. However, he does not distinguish between cases in which an applicative marker with different semantic roles causes obligatory applicativization or optional applicativization depending on the specified semantic role from cases in which an applicative marker causes obligatory applicativization and another applicative marker causes optional applicativization in one language due to the difference in their innate semantic roles. In the latter cases, it is possible that the applicative marker causing obligatory applicativization is a fully-obligatory applicative marker rather than a conditionally-obligatory applicative marker. For example, although Peterson (2007:47-48) mentions that, in Bantu languages, beneficiaries/recipients cause obligatory applicativization, and locatives and instruments cause optional applicativization, he does not mention whether those two groups of meaning are expressed by an identical applicative marker or not in each Bantu language. Thereby, he does not distinguish conditionally-obligatory applicative markers and fully-obligatory applicative markers.

In what follows, examples of role-conditioned obligatory applicative markers will be discussed from my sample languages.

Optionality and obligatoriness of Wolof *-al* applicativization is conditioned in such a way that it is optional when the semantic role is comitative and it is obligatory when the semantic role is recipient/beneficiary. Comitative applicativization and its case-marking counterpart paraphrase is illustrated in (187a) and (187b). Benefactive applicativization and its case-marking counterpart paraphrase is illustrated in (187c) and (187d):

(187) Wolof (Niger-Congo; Gambia/Senegar)

a. *Móodu la Faatu wax-al*
 Móodu FOC.3 Faatu talk to-APPL
 ‘Faatu talked to MÓODU.’

(Dione 2013: 4)

b. *Faatu wax ak Móodu*
 Faatu talk to Móodu
 ‘Faatu talked to Móodu.’

(Dione 2013: 4)

c. *Faatu def-al ko béjjén*
 Faatu make-APPL 3SG horn
 ‘Faatu made horn for him.’

(Dione 2013: 4)

d. *Faatu togg-al Móodu jen wi*
 Faatu cook-APPL Móodu fish the
 ‘Faatu cooked the fish for Móodu.’

(Dione 2013: 1)

If we focus on one semantic role of a multiple-meaning applicative marker, it is just like treating a single-meaning applicative marker. Thereby, obligatory applicativization by role-conditioned obligatory marker may further be subcategorized. For example, in the Wolof *-al* case, when the semantic role is recipient/beneficiary, applicativization is obligatory because Wolof does not have a recipient/beneficiary case-marker (or adposition). This means that *-al* is fully-obligatory when the semantic role is recipient/beneficiary and is optional (probably fully-optional) when the semantic role is comitative. Consequently, the state-of-affair can be summarized as in Table 20:

Table 20. Conditions of Wolof grammatical obligatory applicativization by *-al*

Semantic role	recipient/beneficiary	comitative
Obligatoriness	obligatory	optional

Recall that the other applicative marker *-e* is an optional applicative marker with optional promotion.

How different semantic roles are expressed in Creek by case-marking and applicativization is summarized as follows (Martin 2000; 2011; personal communication, 2021): locative and goal (of a subject) (and more peripheral relations like 'above') are expressed by *-n* (non-nominative case suffix) and/or postpositions (or locational prefixes) (188c), whereas other semantic roles (benefactive, malefactive, goal (of a non-subject), source, possessor, instrument) are expressed by applicatives (commonly with *-n* / without *-n* in colloquial speech, on the applied argument), with the applicative prefixes *im-* (benefactive, malefactive, goal, source, and possessor) (188a) and *is-* (instrumental) (188b).

(188) Creek (Muskogean; Oklahoma)

a. *Bill im-ópona:y-ís*

Bill DAT-talk.LGR-IND

‘Bill is talking for him/her.’

(Martin 2011: 183)

b. *Bill ishoccéycka cóka-n is-hócceyc-ís*

Bill pen letter-OBL INST-write:LGR-IND

‘Bill is writing a letter with a pen.’

(Martin 2000: 392)

c. *Cáni talófa-n ay-áhan-ís*

John town-OBL go:SG-FUT:LGR-IND

‘John is going to town.’

(Martin 2000: 379)

It is important to note that it is not the obligatoriness of the applicativization but the applicativization itself which is conditioned by the semantic roles: locative and goal roles of a subject cannot be applicativized in the first place. In that the benefactive, malefactive,

goal of a non-subject, source, and possessor meanings only can be expressed by the prefix *im-*, these are the only semantic roles that *im-* may have, and the *im-* applicativization does not seem to be further conditioned by feature or base verbs (these kinds of conditions will be discussed later), the following could be said: *im-* is a fully-obligatory applicative marker, due to the absence of semantically compatible case-marker (or adposition)s. In the same vein, it also can be said that *is-* is a fully-obligatory applicative marker, due to the absence of a semantically compatible case-marker (or adposition)s.

Bugaeva (2010) provides a comprehensive description of obligatoriness and optionality of Ainu applicative constructions based on Colloquial Ainu data. The Ainu verbal prefix *e-* is a multiple-meaning applicative marker and may have the meanings of content, location, instrument, theme, cause/purpose, and others (comitative, co-agent, beneficiary, path, or manner) (Bugaeva 2010: 758)⁴². The prefix *e-* has semantically compatible case-marker (or adposition)s in the sense that its meanings of location, instrument, cause/purpose, comitative, co-agent, path, and manner can be paraphrased by means of the postpositions *ta*, *ani*, *kusu*, *tura*, *peka*, and *tura*, respectively (Bugaeva 2010: 758). However, none of these postpositions can be used to paraphrase *e-* applicative constructions with a content, theme, or beneficiary meaning, because of semantic confusions between them and *e-*, so that, for example, using the postposition *ta* with a view to expressing a content meaning would be ungrammatical. Compare (190a) and

⁴² Although Bugaeva does not count goal as a possible meaning of the applicative prefix *e-*, some cases of *e-* applicativization appearing in *Yukar* can be better seen a goal applicativization rather than a location or path applicativization.

(189) Ainu (isolate; Japan)

- a. *shinennepo e-kim-un e-oman e-aikap ruwe tapan*
 alone head-mountain-COP APPL-go APPL-unable DECL thus
 ‘You can’t go alone to the mountain.’

(Kannari & Kindaichi 1963: 108)

- b. *ar-kamiashi utar kamui-nish kashi e-chararse*
 only-demon PL god-heaven upon APPL-flow_along
 ‘The great demons flow along to the upside of the sky.’

(Kannari & Kindaichi 1964: 270)

(190b) below. From (190b), it can be seen that the combination of *mina* ‘laugh’ and the postposition *ta* results in ‘have a smile on’ rather than ‘laugh at’ like in the applicative (190a).

(190) Ainu (isolate; Japan)

- a. *Ponyaumpe shine okkai tapan, tunash tuye yan!*
 Ponyaumpe one be thus quickly cut IMP
tunash raike yan! a-e-mina kusune na
 quickly kill IMP 1PL.INCL-laugh FUT DECL
 ‘Ponyaumpe is just a man. Cut him! Kill him! We will laugh at him.’

(Kannari & Kindaichi 1964: 111)

- b. *i-ko-hosari sancha ka ta mina kane*
 me-APPL-turn_around lips top at smile and
 ‘She looks back at me and has a smile on her lips and...’

(Kannari & Kindaichi 1966: 254)

In that way, *e-* can be said to be a role-conditioned obligatory applicative marker, which is obligatory for expressing content, theme, or beneficiary, but is optional for expressing location, instrument, cause/purpose, comitative, path, or manner. Then, the factors of the obligatoriness of content, theme, and beneficiary applicativization by *e-* can be explained by the absence of corresponding case-marker (or adposition)s in Ainu. This means that, if we focus on each of these semantic roles rather than on the prefix *e-* as a whole, it is possible to say that *e-* is a fully-obligatory applicative marker when the meaning is content, theme, or beneficiary, while it is an optional (probably fully-optional) applicative marker when the meaning is location, instrument, cause/purpose, comitative, path, or manner. The following is an example of a locational meaning:

(191) Ainu (isolate; Japan)

- a. *poro cise ta horari*
 big house at live

‘He lives in a big house.’ (Shibatani (1990; 1996)’s English translation)

(Chiri 1974: 90, cited in Shibatani 1990: 35,65; 1992: 207; 1996: 159)

- b. *poro cise e-horari*
big house APPL-live

‘He lives in a big house.’ (Shibatani (1990; 1996)’s English translation)

(Chiri 1974: 90, cited in Shibatani 1990: 35,65; 1992: 207; 1996: 159)

In the same vein, based on Bugaeva (2010), a similar remark can be made as to the other two Ainu applicative markers, *ko-* and *o-*. The multiple-meaning applicative prefix *ko-* with the possible meanings of addressee, goal, recipient/beneficiary, comitative, malefactive source, and cause/purpose (Bugaeva 2010)⁴³, is a role-conditioned obligatory applicative marker, and it functions as a fully-obligatory applicative marker when the meaning is recipient/beneficiary, while it functions as an optional (probably fully-optional) applicative marker when the meaning is addressee, goal, comitative, malefactive source, or cause/purpose, because, Ainu has postpositions for expressing the former meanings, while it lacks a benefactive case-marker (or adposition). The last Ainu applicative marker, the location-goal single-meaning applicative prefix *o-*, is probably a fully-optional applicative marker in that, as Bugaeva (2010: 759) states, Ainu has postpositions for both meanings (*ta* (see (193) below) and the goal-dedicated *un*). In that way, Ainu instantiates a case as well in which conditionally-obligatory applicative markers and an optional applicative marker coexist in a language.

(193) Ainu (isolate; Japan)

⁴³ Although Bugaeva (2010) does not mention it, some cases looking like malefactive source applicativization by *ko-* appearing in *Yukar* may be interpreted as a possession applicativization as well:

(192) Ainu (isolate; Japan)

- a. *a-kim-ui kashi i-ko-ruiruye*
my-head-on top my-APPL-stroke
‘She strokes my head.’

(Kannari & Kindaichi 1963: 90)

- b. *harkiso'ta ikoshikupmat kamui shirine e-horari*
harki-so-otta i-ko-shikup-mat kamui shirine e-horari
left-seat-at I-APPL-grow-girl goddess like APPL-be.seated
‘My cousin was seated like a goddess at the left seat.’

(Kannari & Kindaichi 1963: 37)

- a. *cise* 'or 'e-'o-'ahun
house inside you-APPL-enter
'You went into the house.'

(Tamura 1988: 15; 2020: 93)

- b. *cise* 'or **ta** 'e-'ahun
house inside in you-enter
'You went into the house.'

(Tamura 1988: 15; 2020: 93)

- c. *a-ewak ushike ta ahun-an wa*
I-live place in enter-I and
'I went into my house and...'

(Kannari & Kindaichi 1966: 157)

The summary of the Ainu case is Table 21 and Table 22:

Table 21. Conditions of Ainu grammatical obligatory applicativization by *e-*

Semantic role	content, theme, or beneficiary	location, goal, instrument, cause/purpose, comitative, co-agent, path, or manner
Obligatoriness	obligatory	optional

Table 22. Conditions of Ainu grammatical obligatory applicativization by *ko-*

Semantic role	recipient/beneficiary	addressee, goal, comitative, malefactive, possessive, or cause/purpose
Obligatoriness	obligatory	optional

In Southeastern Tepehuan, all benefactive relations are expressed by means of its only applicative suffix, *-(i)dya*, which can have a benefactive or comitative meaning (Willett 1981). This is thought to mean that Southeastern Tepehuan does not have a case-marker (or adposition) that is able to express a benefactive meaning, which seems to be actually true judging from Willett (1991: 86-90). In other words, when the semantic role is benefactive, the applicativization is a fully-obligatory applicativization, illustrated in (194a) - (194c). In contrast, when the semantic role of the applied argument is comitative,

applicativization by *-(i)dya* is optional as seen from (194d) and (194e).

(194) Southeastern Tepehuan (Uto-Aztecan; Mexico)

- a. *tu-ñ-som-dya-'-ap* *gu-cutun*
 DUR-1S.DO-sew-APPL-FUT-2S.SG ART-blouse
 ‘You will sew a blouse for me.’

(Willett 1981: 66)

- b. *Jiñ-vacuañ-dya-'-ap* *dya-ñ* *sa'ua.* *guihlim* *jix-'icóra'*
 1S-wash-APPL-FUT-2S.SG ART-1S blanket very ART-dirty
 ‘Please wash my blanket for me. It’s very dirty.’

(Willett 1991: 182)

- c. *cha'-p* *via'* *gu* *viñ?* *ali'ch-ap* *jiñ-choi'-dya-'*
 NEG-2S have ART wine little-2S 1S-pour-APPL-FUT
 ‘Don’t you have any wine (to) pour me a little?’

(Willett 1991: 182)

- d. *tu-'a'ga-'-iñ* *gu-m-'a'mi'-javim*
 DUR-talk-FUT-1S ART-PSR-friends-with
 ‘I’ll talk with your friends (about it).’

(Willett 1981: 68)

- e. *tu-ja-'a'gu-idya-'-iñ* *gu-m-'a'mi'*
 DUR-3S.DO-talk-APPL-FUT-1SG.S ART-PSR-friends
 ‘I’ll talk with/to(?) your friends (about it).’

(Willett 1981: 68)

Consequently, the obligatory applicativization by *-(i)dya* in Southeastern Tepehuan can be summarized like in Table 23:

Table 23. Conditions of Southeastern Tepehuan grammatical obligatory applicativization by *-(i)dya*

Semantic role	beneficiary	comitative
Obligatoriness	obligatory	optional

6.2.1.2.2. Role-conditioned nearly-obligatory applicative markers

As suggested, Situation B covers cases in which oblique coding of a particular semantic role is ungrammatical but also cases in which it is unnatural (or infrequent), not to say ungrammatical at all. Here, the latter cases will be discussed. It may actually be difficult to draw a boundary between ungrammaticality and unnaturalness (or infrequency) of expressing the semantic role in question by non-applicative means, and perhaps, the cases discussed already as role-conditioned obligatory applicative markers could include some things which are actually “nearly-obligatory” cases.

Donohue (2001), discussing *Tukang Besi* applicatives, maintains that, an argument with a high degree of pragmatic prominence tends to be coded as a core, and an argument with a low degree of pragmatic prominence tends to be coded as an oblique, according to the relationship between prominence and coding strategy shown in Figure 11 below:

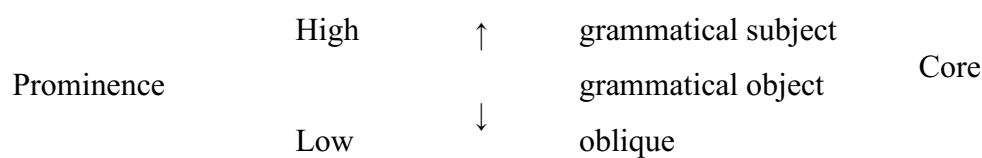


Figure 11. Prominence and Coding strategy (Donohue 2001:218)

Donohue (2001) states that beneficiary arguments are frequently of a high pragmatic prominence through the texts he examined and that this results in the situation where, for encoding beneficiary arguments throughout the texts, applicativization was used in every case instead of an oblique strategy for benefactive marking the language has as in (195) (note that promotion in *Tukang Besi* applicativization is obligatory, as discussed in 2.2 in Chapter 2):

(195) *Tukang Besi* (Malayo-Polynesian; Indonesia)

ku-lunaha te ro'o ako te mansuana=su
 1SG-search.S1 CORE medicine BEN CORE parent=1SG.GEN
 'I am searching for medicine for my parents.'

(Donohue 2001: 230)

The Nez Perce benefactive suffix *-a'n* instantiates a nearly-obligatory applicativization in the sense being discussed. Despite the fact that case-marking

‘I will look after the baby for Maria.’

(Zariquiey Biondi 2018: 680)

6.2.1.2.3 Feature-conditioned obligatory applicative markers

Classificatory features of the noun also may condition obligatoriness of applicativization. The most typical feature to do so seems to be animacy, a Halkomelem case of which Peterson (2007: 48-49) discusses. Below, I will discuss a case of Maasai, from my language sample.

In Maasai, based on Lamoureux (2004), the applicative suffix *-aki* is a conditionally-obligatory applicative marker in such a way that applicativization whose applied arguments are “animate benefactive” ((198b) and (198c)) or “animate mobile goal” (198d) are obligatory, and applicativization whose applied arguments are “inanimate goal” are optional ((198f) and (198g)). It thus can be considered that the obligatoriness is conditioned by animacy.

(198) Maasai (Nilo-Saharan; Kenya/Tanzania)

a. *á-gól*

3>1SG-be.strong

‘I will be strong.’

(Lamoureux 2004: 34)

b. *áa-gól-óki*

3>1SG-be.strong-DAT

He will be strong for me.

(Lamoureux 2004: 34)

c. *ε-yi^ér-áki* *en-kitok* *en-dáà* *ɔl-payián*

3-cook-DAT FSG-woman.NOM F.SG-food.ACC M.SG-man.ACC

‘The woman will cook for the man.’

(Lamoureux 2004: 36)

d. *á-i^shɔ'-ɔki* *em-pálái* *kanísà* *ɔl-payián*

1SG-give-DAT F.SG-letter.ACC church.ACC MSG-man.ACC

‘I will give a letter to the church for the man.’

(Lamoureux 2004: 38)

- f. *k-á-i^durr-áki* *Nairóbi*
 D-1SG-move-DAT Nairobi.ACC
 ‘I will move to Nairobi.’

(Lamoureaux 2004: 35)

- g. *k-á-i^durr* *tε* *Náirɔbi*
 D-1SG-move OBL Nairobi
 ‘I will move from [sic] Nairobi.’

(Lamoureaux 2004: 35)

Conditions of the obligatoriness of *-aki* is summarized in Table 24.

Table 24. Conditions of Maasai grammatical obligatory applicativization by *-aki*

		Semantic role	
		Benefactive	Goal
Animacy	Animate	obligatory	obligatory
	Inanimate	optional	optional

6.2.1.2.4 Base-conditioned obligatory applicative markers

The third possible condition of obligatoriness of applicativization is the base verb. Peterson (2007: 49-50) discusses cases from several languages in which an applicative form of a verb and its historical base verb are significantly different in non-syntactic aspects like semantic, discoursal, or aspectual aspects, considering them kinds of obligatory applicativization. However, he does not put much importance on whether they may be regarded as grammatical applicativization or lexical applicativization, and he has a separate section titled “lexicalization” in Peterson (2007: 169-170) in which he discusses similar types of lexical applicativization. To clarify that base-conditioned obligatory applicativization may be either grammatical or lexical, first I will discuss a case from Yucatec Maya, from my language sample.

In Yucatec Maya, applicativization by the generalized applicative suffix *-t* is generally obligatory when the semantic role of the applied argument is theme, as illustrated from (199a) thorough (199g) below (note that (199c) is significantly semantically different from (199a) and cannot be seen as a case-marking paraphrase of (199a)), and it is optional when it is a different semantic role from theme, as illustrated

by (199h) and (199i). However, it should be noted that, when the semantic role is theme, it is not that the marker causes fully-obligatory applicativization, but rather conditionally-obligatory applicativization. For, (199k) is grammatical in addition to (199j), despite the fact that the semantic role is theme.

(199) Yucatec Maya (Mayan; Belize/Mexico)

- a. *t-in che'h-t-ah in wiits'in*
 PRV-SBJ.1SG laugh-TRR-CMPL POSS1.SG younger_sibling
 'He laughed at / derided my younger sibling.'
 (Lehmann & Verhoeven 2006: 471)
- b. **h che'h-nah-en ti' in wiits'in*
 PRV laugh-CMPL-ABS.1.SG LOC POSS.1.SG younger_sibling
 intended meaning: 'I laughed at/about my younger sibling.'
 (Lehmann & Verhoeven 2006: 471)
- c. *h che'h-nah-en yèetel/yóosal in*
 PRV laugh-CMPL-ABS.1.SG with/because_of POSS.1.SG
wiits'in
 younger_sibling
 'I laughed with/because of my younger sibling.'
 (Lehmann & Verhoeven 2006: 472)
- d. *t-in p'a's-t-ah le ba'x t-u mèt-ah-o'*
 PRV-SBJ.1SG mock-TRR-CMPL DEF thing PRV-SBJ.3 do-CMPL-D2
 'I mocked / criticized the thing he did.'
 (Lehmann & Verhoeven 2006: 474)
- e. **h p'àa's-nah-en ti' yèetel le ba'x*
 PRV mock-CMPL-ABS.1.SG LOC with DEF thing
mèt-ah-o' t-u
 do-CMPL-D2 PRV-SBJ.3
 Intended: 'I mocked / criticized the thing he did.'
 (Lehmann & Verhoeven 2006: 474)
- f. *le xibpal-o' túun xóob (*ti' Le x-ch'úuppal-o')*

DEM boy-D2 PROG\SBJ.3 whistle LOC DEM F-girl-D2

‘The boy is whistling at the girl.’

(Lehmann 2015a: 21)

g. *le xibpal-o' túun xóob-t-ik le*
DEM boy-D2 PROG\SBJ.3 whistle-TRR-INCMPL DEM
x-ch'úuppal-o'
F-girl-D2

‘The boy is whistling at the girl.’

(Lehmann 2015a: 21)

h. *táan u bin bàab-t el ha'-o'*
PROG SBJ.3 go swim-TRR(SUBJ) DEF water-D2

‘He is going to swim in the water.’

(Lehmann & Verhoeven 2006: 471)

i. *táan u bin bàab ich le ha'-o'*
PROG SBJ.3 go swim in DEF water-D2

‘He is going to swim in the water.’

(Lehmann & Verhoeven 2006: 471)

j. *táan u ts'íkil-t-ik u na'*
PROG SBJ.3SG feel.angry-TRR-INCMPL POSS.3SG mother

‘He is annoyed with / is scolding his mother.’

(Lehmann & Verhoeven 2006: 471)

k. *táan u ts'íkil tí' u na'*
PROG SBJ.3SG feel.angry LOC POSS.3SG mother

‘He is annoyed with / is scolding his mother.’

(Lehmann & Verhoeven 2006: 471)

Lehmann & Verhoeven (2006) propose to distinguish processes in cases like (199a), (199d), and (199g) and processes in cases like (199h) and (199j), by calling the former “extraversion” (as Lehmann & Verhoeven (2006: 469) indicate, this is a term by Paris (1985: 145-146)) and the latter “applicative formation”. According to them, extraversion is a lexical process in that it is a lexical requirement of the base verb that a direct object with a theme role is added when the applicative suffix is applied to the verb (pp. 479,481), for example, I suppose that it is related to the assumption that laughing typically

presupposes a specific factor of the emotion, and mocking presupposes a specific person who is supposed to be mocked.

As Lehmann & Verhoeven (2006) discuss, it may be due to the lexical semantics of the base intransitive verb that is responsible for whether the process is obligatory or not. However, it seems to me that the processes which (199a), (199d), and (199g) underwent still can be seen as grammatical processes, based on the observation that the meaning resulting from the combination of the base verb and the suffix is compositional in each case. As will be discussed later, there are types of applicativization with more lexical properties than extraversion. I will only call those types “lexical applicativization” and consider that cases like (199a), (199d), and (199g) are obligatory applicativization (grammatical obligatory applicativization). The terms “applicative formation” and “extraversion” by Lehmann & Verhoeven (2006) seem to correspond to some extent with “optional applicativization” and “obligatory applicativization” as generally talked about.

Consequently, the Yucatec Maya applicative marker *-t* is a conditionally-obligatory applicative marker which is doubly-conditioned, first by semantic roles and then by base verbs, in the way represented in Table 25:

Table 25. Conditions of Yucatec Maya grammatical obligatory applicativization by *-t*

		Semantic role	
		Theme	Non-theme
Base verb	Some verbs	obligatory	optional
	Other verbs	optional	optional

Another instance of base-conditioned grammatical obligatory applicative marker is found in Amharic from my sample. In Amharic, “unaccusatives which do not normally take any referential argument” undergo obligatory applicativization (Amberber 2000: 323):

(200) Amharic (Afro-Asiatic; Ethiopia)

Aster-(in) mǝššə-bb-at

Aster-(ACC) become_night+PERF+3M-APPLIC-3FO

‘It became night (it got dark) to the disadvantage of Aster (lit., ‘Aster, it became night on her’).

(Amberber 2000: 323)

6.2.2 Lexical applicativization

6.2.2.1 Lexical applicativization with the presence of the base as an independent verb

The type of obligatory applicativization to be discussed here is concerned with the situations (182c) depicted in 6.1:

(c) situations in which, although the applicative marker has a semantically compatible case-marker (or adposition) in that language, the combination of a verb and the applicative marker yields a more or less idiomatic meaning which cannot be expressed by the combination of the verb and a case-marker (or adposition).

We saw in 6.2.1.2 that the applicativization by Southeastern Tepehuan *-dya* is obligatory for beneficiary roles and is optional for comitative roles. Actually, however, there is some sense in which one could argue that some cases of comitative applicativization by *-(i)dya* are not optional but obligatory. As we saw, when the applicative suffix *-dya* is combined with the verb ‘talk’ to encode a comitative role, the applicativization is certainly optional. However, when *-(i)dya* is combined with the verb *'oi* (plural *'oipo*) ‘be’ to encode a comitative role, it is somewhat controversial whether the applicativization is really optional. Consider the following examples. (201b) shows a comitative applicativization by *-dya* of the verb ‘be’, built on (201a). The obligatoriness of the comitative applicativization of the verb ‘be’ is evidenced by the ungrammaticality of (201c) and (201d). Note that, it is not that (201c) or (201d) has a different meaning from (201b), but that they themselves cannot be pronounced, as far as judged from the writing of Willett (1981). In any case, the ungrammaticality of (201e) and (201f) suggests that applicativization (accompanied by no case-marking like *-javim*) is the only means for expressing the meaning of ‘accompany’, despite the language’s possession of the comitative case-marker (or adposition).

(201) Southeastern Tepehuan (Uto-Aztecan; Mexico)

a. *ya'-ca-'oipo-'-ich*

here-TEMP-be+PL-FUT-1PL.S

‘We will remain here.’

(Willett 1981: 68)

- b. *ja-‘oi-dya-‘-ich* *gu-m-‘a’mi’*
3PL.DO-be-APPL-FUT-1PL.S ART-PSR-friends
‘We will accompany your friends.’

(Willett 1981: 68)

- c. * *‘oipo-‘-ich* *gu-m-‘a’mi’-javim*
d. * *‘oi-dya-‘-ic* *gu-m-‘a’mi’-javim*

(Willett 1981: 69)

This situation is reminiscent of the Yucatec Maya base-conditioned obligatory applicativization by *-t* discussed in (199) in 6.2.1.2.3. However, there is a crucial difference between those two cases.

First of all, the Southeastern Tepehuan case is likely to involve some degree of semantic fusion of the applicative suffix and the base verb, qualified as a case of “lexicalization” as introduced in 2.5 in Chapter 2. In other words, the obligatoriness of (201b) seems to be related to the likelihood that the meaning of ‘accompany’ results from a slight historical semantic change or semantic fusion of the combination of the base verb and the applicative suffix. This is contrastive to the difficulty with which to see a semantic fusion of the base verb and the applicative suffix in the Yucatec Maya theme obligatory applicativization in (199j), in the sense that there are no substantial differences in how the applicative suffix and the base verb are semantically related to each other between (199a), (199d), and (199g) on the one hand and (199j) on the other. Although, truly, whether the theme applicativization by *-t* in Yucatec Maya is obligatory or not is, like in the Southeastern Tepehuan case, determined depending on the verb, it is not due to a semantic fusion happening for some applicative-verb combinations and not happening for other applicative-verb combinations, but rather is due to some other factor, which is probably concerned with the lexical semantics of the base verb, as suggested by Lehmann & Verhoeven (2006).

In a higher perspective, the difference can be captured in terms of whether grammatical or lexical each type of applicativization is. Thus, I distinguish grammatical applicativization and lexical applicativization. Fully-obligatory applicativization, role-

conditioned obligatory applicativization, feature-conditioned obligatory applicativization, and Yucatec Maya's base-conditioned obligatory applicativization are grammatical applicativization. In contrast, base-conditioned obligatory applicativization in Southeastern Tepehuan is lexical applicativization. The lexuality of lexical applicativization is manifested in the difficulty with which to say that promotion or valency-increasing is the main function of this type of applicativization. In that the verb 'be' is intransitive and its applicativized counterpart, meaning 'accompany', is transitive, one may say that there is a valency-increasing on the base verb. However, the semantic difference seems to be more remarkable, and valency-increasing here seems to be a side effect looking like accidentally stemming from the semantic difference. Moreover, promotion of an NP is impossible to observe, in the sense that flagging counterpart of the combination of the verb 'be' and the applicative suffix is ungrammatical (as in (201d)) in the first place.

In other words, the difficulty of admitting valency-increasing or promotion as a main function of the Southeastern Tepehuan case arises from the assumption that, in each case, the non-applicative form and applicative form are distinct lexical items with a lexical connection but no grammatical connections. This assumption entails that the applicative form of the verb is the only means for expressing that meaning in that language. This means that lexical applicativization is obligatory by nature, while it is different from fully-obligatory applicativization, role-conditioned obligatory applicativization, feature-conditioned obligatory applicativization, and base-conditioned grammatical obligatory applicativization, in that it is lexical. Note that, it is possible to consider that the theme applicativization of the verbs 'laugh' and 'mock' in Yucatec Maya does not involve semantic-valency-increasing, as the existence of a theme participant is supposed by the lexical semantics of those verbs innately. However, in that it involves syntactic-valency-increasing, it can be said to be a grammatical applicativization.

Thus, strictly speaking, the Yucatec Maya case should be called "base-conditioned grammatical obligatory applicativization". Base-conditioned grammatical obligatory applicativization is a type of "grammatical obligatory applicativization", together with fully-obligatory applicativization, role-conditioned obligatory applicativization, and feature-conditioned obligatory applicativization. The Southeastern Tepehuan case, in turn, should be called "base-conditioned lexical obligatory applicativization". The likelihood

is that lexical applicativization can only be conditioned lexically, or more specifically, conditioned by base verbs. Also, it was already mentioned that a lexical applicativization is necessarily an obligatory applicativization. Consequently, this type of applicativization can be rephrased simply as “lexical applicativization”.

If there is an applicative marker which has never undergone lexicalization with any verbs, it will be possible to call it “fully-grammatical applicative marker”. Applicative markers whose lexicalization with a verb I could not find in the literature could be classified as such. If one may want to call something a “fully-lexical applicative marker”, on the other hand, it may be impossible to see as an applicative marker, since it does not show grammatical applicative function no matter which base verbs it is combined with⁴⁴. The term “lexical applicativization” I am using in the present study is a naming arising from a somewhat convenient purpose based on the fact that the same form as an applicative marker is used for non-applicative word formation either. Applicativization itself should be defined as a grammatical phenomenon to the end.

Therefore, it is reasonable to differentiate grammatical applicativization function and lexical applicativization function to classify applicative markers.

However, if one may talk about grammaticality and lexicality of applicativization, it is unavoidable to note that applicativization is commonly described as a derivation process rather than an inflectional process³⁰. For example, Bybee (1985) considers that valency-changing operations in general are kinds of derivation. Mithun (1999: 246; 2011) even characterizes applicatives as “word-formation”, suggesting that applicativization is essentially a lexical process, compatible with the fact that applicativization in Athabaskan languages she describes seems to be mostly lexical applicativization. Such a general view on applicativization is contrastive with the general view on morphological case-marking, in that the latter is commonly described as an inflectional process. This contrast is not only attributable to the occurrence of lexicalization of applicative-verb combinations, because lexicalization of case-noun combinations is never uncommon as well (e.g., Italian *a* ‘to’ + *bastanza* ‘sufficiency’ > *abbastanza* ‘sufficiently’, Japanese *gen* ‘real’ + *ni* ‘at’ >

⁴⁴ Preverbs in languages like French and Italian may instantiate this pattern, in that they seem to have no cases in which a preverb functions as a grammatical applicative marker as *ad-* does in Latin, their parental language.

genni ‘indeed’). The major difference seems to be rather that, generally, whereas a case-marker (or adposition) is combined with a wide variety of nouns, an applicative marker is only combined with a handful of verbs, and different verbs tend to be combined with different applicative markers. In other words, applicativization itself is base-conditioned, and the applicativization paradigm is not shared among every verb. However, this alone cannot be a ground for maintaining that applicativization in general should be deemed a lexical operation or a purely derivational operation. First, it could be the case that, generally, an applicative marker can be combined with any verbs (except in contexts where a case-marking strategy must be used instead), even though they are not attested due to the practical markedness of the combination of the meanings of the verb and the applicative marker.

A further note should be made regarding the difficulty with which to distinguish between grammatical applicativization and lexical applicativization. In theory, it is impossible to find an applicative-and-case-marking pair with literally identical meanings. Like other grammatical means, applicative constructions are not used arbitrarily but are adopted according to functional motivations, meaning that there is necessarily more or less semantic or pragmatic difference between the two syntactic constructions. However, if, since languages are systems, we highlight the fact that every applicative construction expresses a unique meaning or a meaning impossible to express by any other means in that language, we would be forced to say that every applicative construction is obligatory. Doing so invalidates the *raison d’être* of the concept of optionality and obligatoriness of applicative constructions. In order to avoid it, it is necessary to draw between significant semantico-pragmatic effects reaching idiomaticization or semantic fusion and insignificant or negligible semantico-pragmatic effects that are brought about in applicativization. This must be difficult, but is possible to the extent that there are at least clearly varying degrees of semantico-pragmatic effects. At least, the semantic effect occurring in certain applicative-verb combinations is supposed to be greater than the semantic effect that is brought about by default in applicativization. The former breaks down the paraphrastic relationship between applicative construction and case-marking counterpart, but the latter does not.

In what follows, further examples of non-deponent lexical applicativization will be discussed.

In Rama, the applicative prefixes *ba-* and *yu-*, whose diachronic sources are the postpositions *ba* and *u* respectively, has caused colexicalization with some verbs. In (202c), the verb *alpi* ‘look’ is combined with the postposition *ba*, resulting in an ungrammatical sentence. In contrast, in (202a) and (202b), the verb is combined with the applicative prefix *ba-*, forming a grammatical sentence expressing the meaning of ‘look for’. Thus, this falls into this type of lexical applicativization. In (202e) and (202f), the verb *taak* ‘go’ is combined with the postposition *u*, forming a compositional meaning of ‘go with’. In contrast, in (202d), the same verb is combined with the applicative prefix *yu-*, forming a somewhat idiomatic meaning of ‘take, carry’. In that the combination of the same verb with the case-marker (or adposition) is not only not ungrammatical but also has a similar meaning, it is more difficult to determine whether this is lexical applicativization or not than in the case of Southeastern Tepehuan.

(202) Rama (Chibchan; Nicaragua)

a. *ba-an-alpi-u*

RP/for-3PL-look-TNS

‘They looked for (it).’

(Craig 1990: 127)

b. *paalpa aa ba-an-alpi-u*

manatee NEG RP/for-3PL-look-TNS

‘They did not look for a manatee.’

(Craig 1990: 127)

c. **paalpa ba aa an-alpi-u*

manatee PSP/for NEG 3PL-look-TNS

‘(They did not look for a manatee.)’

(Craig 1990: 127)

d. *Kohki yu-an-taak-u*

Kohki RP/with-they-go-TNS

‘They took/carried Kohki.’

(Craig 1990: 129)

e. *Kohki u an-taak-u*

Kohki PSP/with they-go-TNS

‘They went with Kohki.’

(Craig 1990: 129)

- f. *barka aa i-taak-u baaning anul u*
but NEG she-go-ASP DISC them PSP/with
‘... but she would not have gone with them.’

(Craig & Hale 1988: 325)

In Kambera, there are some lexicalized applicative and verb combinations:

(203) Kambera (Malayo-Polynesian; Indonesia)

- a. *na-palu-ya na ahu*
3SG.N-hit-3SG.A ART dog
‘She hits the dog.’

(Klamer 1998: 202)

- b. *na-palu-nya ahu*
3SG.N-hit.for-3SG.D dog
‘She kills a dog for him.’

(Klamer 1998: 202)

- c. *rama* ‘touch X’ > *rama.ng* ‘do/prepare (X) for Y’

(Klamer 1998: 199)

Warrongo also has some lexicalized applicative-verb combinations: *paya-ri-L* ‘sing to (a stick’s rhythm)’:

(204) Warrongo (Pama-Nyungan; Australia)

- jalimpirri-Ø muka-Ø paya-ri-lka*
music_stick-ACC get-IMP sing-VINST-PURP
‘Get a music stick to sing [a song] to [its rhythm].’

(Tsunoda 1998: 364)

The Huallaga Quechua applicative suffix *-pa* has the following pieces of lexicalization:

(205) Huallaga Quechua (Quechuan; Peru)

Base verb	Lexical applicativization by <i>-pa</i>
<i>achu-</i> ‘to pull up’	<i>achu-pa-</i> ‘to weed’
<i>kuti-</i> ‘to return’	<i>kuti-pa-</i> ‘to do the second corn cultivation’
<i>tira</i> ‘to throw’	<i>tira-pa-</i> ‘to cultivate’

(Weber 1989: 159)

Cases of the Tariana suffix *-ta* are also reported:

(206) Tariana (Arawakan; Amazonia)

Base verb	Lexical applicativization by <i>-ta</i>
<i>-mayã</i> ‘act in a false, treacherous way’	<i>mayẽ(-ta)</i> ‘tell a lie’
<i>-ira</i> ‘order’	<i>-ireta</i> ‘order by saying something’
<i>-ka</i> ‘see’	<i>-keta</i> ‘meet, encounter’
<i>-hima</i> ‘hear’	<i>-himeta</i> ‘think, feel’

(Aikhenvald 2000: 168,169)

Below is a repetition of Mosestén lexicalization (*dyij-yi* ‘think’ plus *-tyi* results in ‘remember’) introduced in 1.4.4 in Chapter 1:

(207) Mosestén (Mosestén-Chon; Bolivia)

<i>jike-katyi</i>	<i>dyij-ye-tya-ki</i>	<i>okoko-we</i>	<i>tětëi-wë</i>
PS-EH	think-VY-APD-AN.M.S	little.toad-DR	frog-DR

‘Then he remembered the toads, the frogs.’

(Sakel 2004: 320)

Aoki (1979: 10) provides the following example of lexicalization of Nez Perce applicative suffix *-oo* (~ *-uu*), where the sum of ‘go’ and allative (‘to’) equals to ‘marry’.

(208) Nez Perce (Sahaptin-Klamath; Idaho)

<i>kum</i>	<i>‘ekiy-uu-yu’</i>
INDEFINITE-you	1/2.TRANSITIVE-go-ALLATIVE.APPLICATIVE-IRREALIS

‘Perhaps you will marry him.’

(Aoki 1979: 10, cited in Rude 1985: 178 and Mithun 1999: 247)

Finally, as discussed in Chapter 2, Chechen-Ingush involves lexicalization.

As seen, lexicalization cases seem to take direct objects, which can be seen as a relic

of the valency-increasing function the grammatical applicative marker had. However, valency-increasing in lexical applicativization is quite irregular and is ad hoc determined according to the semantics resulting from the semantic fusion.

I have no instances where a lexical applicative marker became a grammatical applicative marker. This coheres with the principle that grammaticalization is a unidirectional process, it being generally rare that a lexical item becomes a grammatical item (e.g., Kuteva et al. 2019). As will be mentioned later, I suppose that base-conditioned grammatical obligatory applicative markers may be likely to be origins of lexical applicative markers.

6.2.2.2 Lexical applicativization with the absence of the base as an independent verb

The type of obligatory applicativization to be discussed here is concerned with the situations (182d) depicted in 8.1.:

(d) situations in which the base verb cannot be used independently or is not existent (anymore) in that language.

In Hočank (this is an endonym of Winnebago, included in my language sample), according to Helmbrecht (2008: 146), the composition *h̄j-a-pé* (someone-APPL.on-wait_for) historically became the synchronically unanalysable verb *hape* ‘await’, and the verb *pé* has lost its independent usage. Lipkind (1945: 15) also suggests similar situations for the combination of the applicative prefix *a-* with other verbs.

A similar case in Adyghe is discussed in Lander & Letuchiy (2017: 291), although this language is not included in my sample:

(209) Lander & Letuchiy (2017: 291)

Some verbs cannot occur without applicatives. Most of them are stative predicates: cf. the posture stems ‘sit’, ‘stand’, ‘lie’, which require locative applicatives, the existential verb ‘be’ found either with locative applicatives or with an applicative introducing the possessor (then, the verb conveys the semantics of the predicative possession), the verbs ‘want’ and ‘must’ formed with the benefactive prefix, the verb ‘be part of’, which includes the locative applicatives, etc. Many of them are

lexicalized, but for the combinations of posture roots with locative prefixes lexicalization is by no means obvious.

According to Nagano (2018), the following is rGyalrong lexicalized verbs with the applicative prefix *na-*, whose base verbs, **zok:*, **ya*, and **yo*, do not exist:

(210) rGyalrong (Sino-Tibetan; Sichuan)

- a. *ña čorbo to-nazon*
ña čorbo to-nazok-ñ
 1SG plate PST-lick-1SG
 ‘I licked the plate.’

(Nagano 2018: 122)

- b. *khəna təndza to-nazok*
 dog food PST-lick
 ‘The dog licked the food.’

(Nagano 2018: 122)

- c. *wuŋo gyagar=ne nə-naya-s*
 3SG India=from PST-return-PFV
 ‘He came back from India.’

(Nagano 2018: 122)

- d. *ña borso Ripin naya-ñ*
 1SG next_year Japan return-1SG
 ‘I’m going back to Japan next year.’

(Nagano 2018: 122)

- e. *ña wuŋo kə-naya nayo-ñ*
 1S 3S INF-return wait-1S
 ‘I’ll wait for his coming back home.’

(Nagano 2018: 122)

- f. *ña təla nənaslon*
ña təla nə-na-slot-ñ
 1S road PST-APPL-lose-1S

‘I got lost.’

(Nagano 2018: 123)

g. *ña nə-namomi-ñ*

1S PST-get_ignorant-1S

‘I got lost.’

(Nagano 2018: 123)

Finally, Mithun (2011) also discusses that, in Athabaskan languages, base verbs of some applicative verbs cannot be used independently.

Such situations also realize lexical applicativization in the sense that the applicative form of the verb is rather appropriately considered an independent verb, with its historical base verb itself nonexistent. The part of the verb which is historically an applicative marker is synchronically seen as a part which is indispensable for the verb to exist as itself. Abstracting the applicative marker is made even more difficult in some cases by the ambiguity of the formal boundary between the applicative marker and the historical base verb. I will call such cases of applicativization “deponent lexical applicativization”. Another way to put it is to say that the base verb is fossilized. Let us think about whether and in what way promotion or valency-increasing is supposable in these cases.

Like in the case of non-deponent obligatory applicativization, promotion of an NP is impossible to suppose, in that no case-marking strategy is supposed to be able to express the same meaning, meaning that there is nothing that is supposed to be promoted to become the complement of the applicative form of the verb.

Valency-increasing, which we saw is likely to be observed as a side effect in non-deponent obligatory applicativization, is not observable to the extent that its base verb cannot have a valency in the sense that it does not exist; valency-increasing may be admitted only in a historical sense in some cases.

Therefore, promotion is impossible to suppose and valency-increasing is supposable only in a marginal way. It is in those senses that deponent lexical applicativization cannot be seen as a case of grammatical applicativization. It is even more lexical than non-deponent lexical applicativization: in the latter cases, case-marking strategy is impossible and the base verb is existent as a free morpheme, but in the former cases, not only case-marking strategy is impossible but also the base verb is not existent as a free morpheme.

Like non-deponent lexical applicativization, deponent lexical applicativization may be seen as a type of obligatory applicativization. When seen as such, it is characterized as a base-conditioned obligatory applicativization, in that base verbs differ in terms of whether they are fossilized or not. (211) is an example of the combination of the applicative prefix, discussed above, and a verb which is not fossilized:

(211) Winnebago (Siouan; Midwestern United States)

kook-ra wa-a-mink-shannan

box-DEF PL-SUPRAESSIVE-lie-DECL

‘He lay on the boxes.’

(Craig & Hale 1988: 315)

6.3 Diachronic scenarios of the formation of obligatory applicativization

It can be seen that valency-increasing is generally well observed from the most prototypical type (i.e., optional applicativization with obligatory promotion) through the least prototypical type (i.e., deponent lexical applicativization) in different senses and ways. In contrast, promotion is only observable in the two most prototypical types (i.e., optional applicativization with obligatory promotion and optional applicativization with optional promotion).

This contrast can be attributed to the following fact. Since valency-increasing is a V-level operation, realized by the application of an applicative affix onto the verb, it is not damaged critically by diachronic changes in higher levels around the applicativized verb and the base verb. In particular, the situation in which the base verb is intransitive and the applicative form is transitive is likely to be well preserved: some verb’s being transitive specifies neither which NP it takes as an object nor semantic relationship between the verb and its object. Thus, in a sense, everything is complete within the verbal complex. Meanwhile, promotion, although it is interrelated with the applicative marker and the base verb as well, is an NP-level operation. For that reason, promotion easily becomes inapplicable if something happens on the case-marker (or adposition) used for the non-applicative counterpart or on the semantics of the applicative form of the verb that causes significant semantic conflict. This process is what we are going to look at here, namely, how optional applicative markers become obligatory applicative markers.

As noted about the diachronic backgrounds of optional applicatives and their non-

applicative counterparts in 5.2, hypotheses that will be presented and discussed here as to diachronic processes of the rise and fall of obligatory applicative constructions are never the only possibilities, and in Chapter 7, all theoretically possible patterns will be shown together with those of the diachrony of optional applicative constructions, from a single framework.

6.3.1 Diachronic scenario of the formation of grammatical obligatory applicativization

First, let us discuss how obligatoriness of grammatical obligatory applicative markers is attained. As discussed in 6.2.1, grammatical obligatory applicative markers are divided into fully-obligatory, conditionally-obligatory, and base-conditioned grammatical applicative markers. As suggested in 6.2.1.2, role-conditioned obligatory applicative marker with multiple meanings may show a full obligatoriness for a certain semantic role. As such cases can be applied similar diachronic scenarios to the cases of fully-obligatory applicative markers, their diachronic scenarios will be discussed together. After that, diachronic scenarios for the feature-conditioned obligatory applicative markers will be discussed.

6.3.1.1 Diachronic scenario of the formation of fully-obligatory applicativization and role-conditioned obligatory applicativization

Below is the list of the fully-obligatory applicative markers in my sample languages. These are based on the descriptions made in 6.2.1.1.

Table 26. Fully-obligatory applicative markers

Language	Applicative marker
Southern Sierra Miwok	<i>-na, -nY, -pa, -tuku</i>
Shipibo-Konibo	<i>-xon, -(V)naan ~ -(V)n, -ki(i)n</i>
Kashibo-Kakataibo	<i>-anan</i>
Barupu	<i>-ya, -ke, -ta, -na, -i, -e, -o⁽¹⁾, -o⁽²⁾</i>
Nahuatl	<i>-lia (~ -ia, -i, -huia)</i>

Below is the list of the role-conditioned obligatory applicative markers in my sample languages. These are based on the descriptions made in 6.2.1.2.

Table 27. Role-conditioned obligatory applicative markers

Language	Applicative marker
Wolof	<i>-al</i>
Creek	<i>im-, is-</i>
Ainu	<i>e-, ko-</i>
Yucatec Maya	<i>-t</i>
Southeastern Tepehuan	<i>-(i)dya</i>

Now, it will be discussed what specifically happens to render formerly applicable promotion fully-inapplicable. First of all, promotion becomes unobservable once semantically compatible case-marking construction disappears as a result of: (1) disappearance of the semantically compatible case-marker (or adposition) in that language, (2) semantic change of the applicative marker which does not happen for its originally semantically compatible case-marker (or adposition), or (3) semantic fusion of the applicative marker with the base verb which does not happen for the combination of a semantically compatible case-marker (or adposition) with the same verb, or (4) disappearance of the base verb as a free morpheme in that language. As already indicated, (1) and (2) cover the formation of grammatical obligatory applicativization, (3) covers the formation of obligatory non-deponent lexical applicativization, and (4) covers the formation of obligatory deponent lexical applicativization.

I deem that, basically, the immediate past of an obligatory applicative marker is an optional applicative marker, not the nonexistence of the applicative marker, for the following reason. It is theoretically unlike that fully-obligatory applicativization developed when there still was no semantically compatible non-applicative grammatical means (e.g., case-marking, verb serialization, or noun incorporation) in that language, since, it would mean that, before the development of the applicative marker, there was no single means for grammatically expressing that meaning in that language, unless there was an older applicative marker that could express that meaning. Such a situation could have been possible in the very initial stage of human languages with no single grammaticalized elements yet. However, it is possible to conceive three situations which

seem to be more commonly applicable.

6.3.1.1.1 Pattern #ob1

Pattern #ob1⁴⁵

The source of the applicative marker is a case-marker (or adposition), formerly there were both applicative means and case-marking means for expressing that meaning, and then the case-marking means become semantically incompatible with the applicative marker by making semantic conflicts with it or by disappearing in that language. In that case, it is possible either that it is the case-marker (or adposition) from which the applicative marker developed or that the two markers are not historically related. I suppose that the latter is less likely to be the case, since, although it makes us imagine a situation in which there were two case-marker (or adposition)s with similar meanings, at least one of them should have been historically related with the applicative marker. Whichever is the case, it might be the case that the case-marker (or adposition) disappeared immediately after the applicative marker.

In my language sample, there is no single language which has a fully-obligatory applicative marker clearly coming from an adposition. The most likely one is Kashibo-Kakataibo. The possessive postposition =*nan* and the fully-obligatory malefactive applicative suffix -*anan* show a phonological similarity, suggesting the possibility that -*anan* dates back to a postposition and semantic conflict was yielded through history so that the paraphrase is impossible. However, as discussed in Chapter 4, an applicative suffix, in principle, develops from a preposition rather than from a postposition. Thus, it will be more plausible that =*nan* and -*anan* are developments from a common source.

(212) Kashibo-Kakataibo (Panoan; Peru)

- a. 'ēn kana bata *Marianan* biti 'ain
 'ē=n kana bata *Maria=nan* bits-ti 'ain
 1SG=A NAR.1SG candy.ABS Maria=POS pick.up-NOM be.1/2PL

'I will pick up candy for Maria (lit., 'I will bring the candies, the Maria's

⁴⁵ The symbol *ob* stands for "obligatory" of "obligatory applicatives".

ones’).’

(Zariquiey Biondi 2018: 680)

b. *Juanën ka Maria nipanaanxa*

Juan=n ka Maria nipat-anan-a-x-a

Juan=ERG NAR.3PL Maria.ABS throw_down-MAL-PERF-3PL-NON.PROX

‘Juan threw Maria down to her detriment.’

(Zariquiey Biondi 2018: 685)

In general, the cause of the full obligatoriness of an applicative marker is pertinent to whether that language completely lacks case-marking system itself or not.

Southern Sierra Miwok and Shipibo-Konibo do not completely lack case-marker (or adposition)s. For example, the Southern Sierra Miwok instrumental case *-š* or *-šĩ* (Freeland 1951: 24) could have been available for expressing benefactive meaning. Of course, it does not exclude the possibility that there was a case-marker (or adposition) that could express a benefactive meaning and the possibility that the meanings of the applicative suffixes were originally some things that could be expressed by means of some case-marker (or adposition)s in the language. A similar remark can be applied to Shipibo-Konibo as well. For example, it is possible that the oblique suffix *-ki* was formerly able to express a malefactive meaning, another possibility being that the applicative suffix used to express a different meaning, which was covered by *-ki*. Moreover, those do not exclude the possibility as well that there used to be a different malefactive case-marker (or adposition).

Therefore, languages which have a fully-obligatory applicative marker and do not completely lack case-marking system can be assumed to have formerly had a case-marker (or adposition) for paraphrase of the applicative constructions. In contrast, if a language has a fully-obligatory applicative marker and completely lacks case-marking system, it is possible that it formerly had a case-marker (or adposition) now lost for paraphrase of the applicative constructions. However, in many cases, the cause seems to be rather attributable to another factor: verbal or nominal origins of the applicative markers. As mentioned, my language sample does not have a language which has a fully-obligatory applicative marker clearly coming from an adposition. Although Southern Sierra Miwok, Shipibo-Konibo, and Kashibo-Kakataibo have fully-obligatory applicative markers and case-marking systems at the same time, it does not necessarily mean that those applicative

markers have adpositional origins. Thus, it is considered that Pattern #ob2 or Pattern #ob3 will be applied to more languages, which will be discussed below.

6.3.1.1.2. Pattern #ob2

Pattern #ob2

That meaning was formerly expressed by means of verb serialization, and then the serial verb developed into an applicative marker through morphologization. In that case, the form may either be recognized as a serial verb or not. The applicativization is obligatory in the sense that case-marking strategy is not available for expressing that meaning. It is not impossible that there was a historically related or unrelated semantically compatible case-marker (or adposition) that could serve as a case-marking strategy for expressing that meaning at least before the verb started to be used as a serial verb. However, obviously, the possibility that there once was a semantically compatible case-marker (or adposition) at all is higher in the pattern #ob1 than in the pattern #ob2. Note that this also covers cases in which applicative markers arose from causative markers, which were already affixed to verbs, and a case-marking strategy was absent when the applicative markers were born.

Pattern #ob2 is the case in Barupu. According to Donohue (2003), the Barupu applicative markers have properties of serial verbs, suggesting their origins in verb serialization. When the form is seen as an applicative marker, it means that it is an applicative means for expressing the benefactive meaning. When the form is seen as a serial verb, it may be seen as a non-applicative means for expressing the benefactive meaning. If, in that way, it is assumed that the benefactive meaning can be expressed by either means despite the fact that they form constructions looking entirely the same, one could say that this is a case of optional applicativization. If the serial verb usage is in the course of disappearing in the language, this situation will be understood as shift from optional applicativization to obligatory applicativization. However, Donohue (2003: 114) mentions that the Barupu applicative constructions are obligatory (“dynamic” in his terminology) ones, based on the idea apparently shared by many other authors that the obligatoriness (dynamicity, in his terminology) of applicativization is by definition determined by availability of semantically compatible case-marking only. Following this

definition of obligatoriness of applicativization, I apply the diachronic explanation above mentioned to the formation of the obligatoriness of the Barupu applicativization. However, in that Barupu does not entirely lack case-marking system, the possibility is still not completely abandoned as well that one of its case-marker (or adposition)s formerly had a similar meaning with some of its applicative markers, realizing optional applicativization, and then the semantic similarity disappeared through historical semantic change.

Nahuatl is another language in my sample to which this scenario may be applicable. Nahuatl at least entirely lacks morphological case-marking, and its postposition-like relational nouns are presumably recent developments. Thus, if the meanings expressed by the applicative marker today could formerly be expressed by a case-marker (or adposition), it must be something not existent anymore, as stated in the FIRST scenario. However, it should be noted that the Nahuatl applicative suffix reportedly comes from a serial verb (Baker 1996: 431). Thus, like in the case of Barupu, it is somewhat difficult to estimate which scenario is the case for Nahuatl. It may be either the case or not that there was not a case-marking strategy even when the applicative suffixes were still serial verbs.

Creek also matches this pattern. As seen in 6.2.1.1, its applicative markers *im-* and *is-* are fully-obligatory applicative prefixes in that there are no case-marker (or adposition)s in Creek that can express any meanings of them. In historical terms, *im-* comes from the still existing verb *im* 'give' (Jack B. Martin, personal communication, 2021), and *is-* comes from the still existing verb *is* 'take, hold' (Booker 1980; Martin 2000: 392; personal communication, 2021). Besides, it will probably be the case that neither verb has developed a case-marker (or adposition) separately. It is not impossible that some of the case-marker (or adposition)s in Creek were formerly able to express a meaning exclusively expressed by applicativization today, but it is less likely. Thus, it is likely that the Creek applicativization is fully-obligatory because, the applicative markers originate from verbs, the verbs did not develop case-marker (or adposition)s, and there has been no historically unrelated semantically compatible case-marker (or adposition) as well.

So far, for each language with an applicative marker which is fully-obligatory because the applicative marker developed from a verb or noun, it was noted that it is not impossible that formerly the applicative constructions could be paraphrased by a historically non-related semantically compatible case-marker (or adposition), and the

applicative constructions became obligatory because they disappeared or there arose semantic conflicts between the applicative marker and the case-marker (or adposition). I recognize only one language in my language sample which may actually illustrate such a pattern. This is Ainu. For, it may be the case that a case-marker (or adposition) developed separately from the verb which yielded the applicative prefix *ko-*, and then it became obsolete, thus helping the *ko-* applicativization expressing recipient-beneficiary semantic roles to become fully-obligatory. The applicative prefix *ko-* (213b) presumably comes from the still existing verb *kor* ‘have’ (Kindaichi 1991 [1931]: 275-276; Bugaeva 2010: 773-774), and, as was discussed in 6.2.1.2.1, it is fully-obligatory when the semantic role is recipient/beneficiary. Besides, as Bugaeva (2010: 759) suggests, another means to express a recipient/beneficiary meaning in Ainu is to use the periphrastic benefactive construction by the sequence *wa kor-e* (‘and have-CAUS’), which literally means ‘and give’ (213a)⁴⁶:

(213) Ainu (isolate; Japan)

- a. *i-ruokaomare wa i-kore yan!*
 me-succeed and me-give IMP
 ‘Please take my place!’

(Kannari & Kindaichi 1963: 411)

- b. *utki i-ko-tarara a-uina chiki i-ko-i-yomare*
 glass me-APPL-hold.out I-take when me-APPL-ANTIP-pour
 ‘She hands over a glass to me. I receive it and she pours alcohol for me.’

(Kannari & Kindaichi 1964: 221)

Meanwhile, it is difficult to find a cognate case-marker (or adposition) of *kor*. Relevant examples I have are presented below, from *Yukar*:

(214) Ainu (isolate; Japan)

- a. *kamuineambe i-tek-ko-rarpa i-mon-ko-rarpa*

⁴⁶ I suspect that this could be influence from an analogous benefactive construction in Japanese as cited as (150) in 4.5 in Chapter 4.

worshipful_one me-hand-with-hold me-arm-with-hold

‘The worshipful one holds me with his hands and holds me with his arms.’

(Kannari & Kindaichi 1959: 189-190)

b. *a-op-ko-tata* *a-emush-ko-tata*

me-pike-with-hack me-sword-with-hack

‘(they) chop me with pikes and chop me with swords.’

(Kannari & Kindaichi 1959: 206)

c. *kamuineambe* *i-bit-ko-kishma* *i-toi-ko-kishma*

worshipful_one me-small_stone-with-seize me-soil-with-seize

‘The worshipful one swiftly seizes me and skillfully seizes me, and...’

(Kannari & Kindaichi 1959: 241)

In each of these examples, it is ambiguous that to which element, its preceding one or its following one, the affix *ko* is bound. In other words, it is either *i-toi-* or *toi-ko-* which is incorporated. This example suggests the possibility that *ko* could be bound to its preceding noun, rather than its following verb, or could function as a postposition rather than as an applicative prefix or a serial verb. If it is the case that the form *ko* formerly could function either as a postposition or as an applicative prefix with the same meanings, the historical factor of the full obligatoriness of the recipient/beneficiary applicativization would be that the postposition usage disappeared leaving the applicative usage only. If it is not, the historical factor would be that the applicative prefix *ko-* just developed from a serial verb *kor* or *ko*, and a case-marker (or adposition) has never emerged from it separately.

6.3.1.1.3. Pattern #ob3

Pattern #ob3

That meaning was formerly expressed by means of noun incorporation, and then the noun incorporated developed into an applicative marker through morphologization. In that case, the form may either be recognized as an incorporate noun or not. In either case, the applicativization is obligatory in the sense that case-marking strategy is not available for expressing that meaning. It is not impossible that there was a historically related or unrelated semantically compatible case-marker (or adposition) that could serve as a case-marking strategy for expressing that meaning at least before the noun started to be used

as an incorporated noun. However, obviously, the possibility that there once was a semantically compatible case-marker (or adposition) at all is higher in the pattern #ob1 than in the pattern #ob3.

Here, I focus on Ainu and will provide a case study of Ainu of some length.

In Ainu, the origin of the applicative prefix *e-* is not completely certain, but it has some possible scenarios. The first scenario derives from Bugaeva (2010: 782,784)'s postulation that the third Ainu applicative prefix *o-*, which is an optional (probably fully-optional) applicative marker, comes from the noun *o* (~ *ho*) 'buttock' through noun incorporation. From this, it is easy to assume by analogy that the applicative prefix *e-* may come from the noun *e* (~ *he*) 'head' (for references to this scenario by other scholars, see Bugaeva (2010: 762)), considering the behavioral similarities between *o* (~ *ho*) and *e* (~ *he*) in other parts of the Ainu grammar (e.g., see Tamura 2001 [1973]).

The second scenario is based on my own consideration, and this is a prefixation of the obsolete adverb/postposition *e* 'there, at'. In notes by Kyosuke Kindaichi of *Yukar* texts, in many examples of the applicative construction by *e-*, Kindaichi explains that the element *e-* means 'there' (for example, in Kannari & Kindaichi (1963: 65)). Also see Kindaichi (1991 [1931]), where he describes the expressions *e-un hosari* (there-at look_back) 'he looked back there.' (p. 181) and *e-un a!* (there-at sit) 'Sit there!' (p. 264). Furthermore, Kindaichi (1991 [1931]) has examples like the following, in which the element *e*, to which Kindaichi attributes the meaning of 'there', seems to be in appositive relationship with the preceding NP *kotan-kotchake pishui* 'the beach in front of the village':

(215) Ainu (isolate; Japan)

kotan-kotchake pishui yakura chi-e-omare
village-ahead beach watchtower we-there-put

'A watchtower is placed on the beach in front of the village.'

(Kindaichi 1991 [1931]: 195)

The postposition-like *e* is found in *Yukar* texts; the examples exhibited in (163) in 5.2.2 in Chapter 5 are repeated below as (216). The word *tekekar* 'hand-made' may be lexicalized to some extent as an adjective for modification:

(216) Ainu (isolate; Japan)

- a. *kamuiranke-tam* *shirka tanne teshpa kane*
godgiven-sword bent long squid and
kutbok-e-chiu
belt-below-at-arrange

‘The sword of the god gift is bent sharply into the spear squid and inserted under the obi, and...’

(Kannari & Kindaichi 1959: 153-154)

- b. *tek-e-kar* *inau* *ari*
hand-with-make whittled_willow with
‘with hand-made pieces of whittled willow,’

(Kannari & Kindaichi 1959: 359)

The possibility I would like to point out is that, the ultimate origin of the applicative prefix *e-* may have been the adverb *e* ‘there’, and it became prefixed to verbs with the meaning retained, functioning as if it was a general locational affix. The referent of ‘there’ could be identified with a preceding NP, as if it was in an appositive relationship with that NP. Based on this scenario, Let us take the sentence below (217) as an example. In the initial stage of the development of the applicative *e-*, when it was still like an adverb, it would mean ‘beside the fire, there, they sit.’ Then, the meaning of ‘there’ was bleached but kept implying that there was an unspecified location where the action described by the verb took place intended by the speaker. Then, it would start to mean ‘Beside the fire, they sit.’

(217) Ainu (isolate; Japan)

- abe tuisam e-horar-pa*
fire beside APPL-sit-PL-sit
‘They sit beside the fire.’

(Kannari & Kindaichi 1964: 299)

The fact that the applied argument of *e-* may be coded by zero anaphora seems to corroborate this scenario, because the referent of ‘there’ could be identified with an NP that occurred in a different sentence far before in the discourse, and it did not need to be explicitly mentioned somewhere at all.

In that way, as I postulate, the meaning and behavior of *e* ‘there’ triggered its reinterpretation as an applicative marker, and then it developed several specific meanings through semantic extensions probably in the way Bugaeva (2010) discusses. Note that, when the semantic role the prefix *e-* expresses is location, it may be even hard to tell whether it is an applicative marker or an element meaning ‘there’. As noted above, In the analysis of *Yukar* texts, Kyosuke Kindaichi (Kannari & Kindaichi 1963: 65) explains the prefix *e-* in the cases in which it may be considered marking a locative applicative construction taking a zero-anaphora-coded applied argument as an element meaning ‘there’, which makes sense, because ‘there’ does not have to be an independent word.

This scenario is also compatible with the plausibility that the locative postposition *ta* (which, more precisely, also can mark goal and time roles) has undergone a similar pattern of development. For, Batchelor (1905: 435), Kindaichi (1991 [1931]: 178-179), and Kim (2000: 249,432) note the adverb-noun *ta* ‘there’, and its apparently cognate adverb *te* ‘here’ is described in Batchelor (1905: 442), Kindaichi (1991 [1931]: 155,179), and Kim (2000: 248,433). Examples of the adverb-noun *ta* are provided below:

(218) Ainu (isolate; Japan)

a. *ta* *chiare* *abe* *soita* *parse* *semkorachi*

there lighted fire outside burn as

‘As if an already lighted fire is burning outside,’

(Kannari & Kindaichi 1966: 125)

b. *ta* *okai* *chinomi* *kamui*

there be worshipped god

‘worshipped gods who are there’

(Kannari & Kindaichi 1966: 78)

The diachronic mechanism I then suppose is as follows. The locative postposition *ta* ‘at’ was originally the adverb/noun *ta* ‘there’, and its referent was identified with an NP that it immediately followed, in other words, the adverb *ta* placed immediately before a verb was in an appositive relationship with the NP. As the phonological dependency of *ta* on its preceding NP augmented, *ta* was reinterpreted to be a locative postposition, after which the goal and time meanings developed in addition. That its adverbial usage was earlier than its postpositional usage is also underpinned by the fact that the adverb *te* ‘here’ does

not have a postposition usage (unlike the Winnebago adverb *egi* ‘here’ (Lipkind 1945: 52), which will be discussed below). Plus, it should be noted that, the postposition *e* probably developed in a similar way from the adverb *e*, after which it became the applicative prefix *e-* in the way discussed already. So, according to this scenario, the adverb *ta* ‘there’ became a locative postposition, and the adverb *e* ‘there’ became a locative applicative prefix, through analogous mechanisms.

This scenario seems to further be supported by the fact that, as Bugaeva (2010: 758) demonstrates, in many cases of colloquial speech, it is *ta* which is used to paraphrase locative applicativization by *e-* rather than other locative postpositions like *un* or *ne*, both of which evidently have origins in copulas (Kindaichi 1991 [1931]: 89; Tamura 2020: 67). As will be mentioned later, the locative postposition *otta* may be used as well. The following is an example of co-occurrence of the applicative *e-* and the postposition *ta*, which corresponds with *e-* applicativization without promotion discussed in 2.3.1.2.2 in Chapter 2:

(219) Ainu (isolate; Japan)

hoka-etok ta pon-urar tapkop e-horari
 fireplace-origin at small-haze mountaintop APPL-sit
 ‘A mountain of haze is seated at the end of the fireplace.’

(Kannari & Kindaichi 1963: 171)

Note additionally that similar developmental patterns are attested in postpositions in Winnebago: the adverb *eja* ‘there’ developed into a locative and directional postposition, and the adverb *egi* ‘here’ into a locative and directional postposition too (Lipkind 1945: 52). Moreover, I even suspect that the benefactive and possessive applicative prefix *gi-* (Craig & Hale 1988) could be a result of grammatical and semantic changes the adverb *egi* ‘here’ underwent. If that is true, it will cohere with the supposed development from the adverb *e* ‘there’ into the multiple-meaning applicative *e-* in Ainu. Besides, as Nam (2021: 69) points out, Winnebago shares several typological properties with Ainu, including: SOV basic word order, postposition predominance, person-marking prefixes on the verb and noun, and presence of applicative prefixes (based on Lipkind (1945)). This seems to make it more plausible that the parallel grammatical change happened in Ainu as well.

Thus, according to which element the applicative prefix *e-* immediately dates back to, it is possible to largely distinguish two scenarios concerning its history. In what follows, I will discuss how the formation of the full obligatoriness of *e-* applicativization expressing some semantic roles can be historically explained in light of each of those two scenarios.

First, if the ultimate origin of *e-* is *he*, and the obsolete adverb/postposition *e* is a development from *he*, the explanation would be as follows: after *he* developed the applicative *e-* and the adverb/postposition *e* separately through erosion of the /h/ sound, the former survived, and the latter became obsolete. Although historically unrelated semantically compatible postpositions like *ta* served as non-applicative means for expressing some semantic roles of *e-*, it did not cover other semantic roles, such as that of content. Therefore, the factor of the full obligatoriness of *e-* applicativization for those semantic roles may be identified with the fact that it has a nominal origin, and the case-marker (or adposition) the noun developed separately is not commonly used anymore. However, it is also possible that even the adverb/postposition *e* was not able to cover some of the semantic roles of the applicative *e-*. For, it is plausible that some semantic roles were new developments that only emerged for the applicative *e-* (see Bugaeva 2010). This is supported by the fact that *e-* can express quite a wide range of meanings, and Bugaeva (2010) discusses how semantic extension that resulted in this situation historically took place.

In contrast, if the ultimate origin is the adverb/postposition *e*, and the noun *he* is not related with either it or the applicative *e-*, the explanation is not essentially different from the first case discussed above: after *he* developed the applicative *e-*, *e-* underwent semantic extensions alone so that some of its meanings were able to paraphrase by case-marker (or adposition)s, but others were not. Additionally, in the case in which the applicative *e-* developed from the adverb/postposition *e* in that way, it is also possible that the ultimate origin of the adverb/postposition *e* ‘there’ is the noun *he* ‘head’. In that case as well, the explanation will not be significantly different from the first one.

Therefore, whichever scenario is correct, the key for explaining in historical terms the full obligatoriness of the *e-* applicativization for some semantic roles seems to lie in the semantic extensions that the applicative *e-* underwent. In particular, as Bugaeva (2010) discusses, the content meaning seems to be one of the later developments. In what

follows, focusing on this particular meaning, it will be discussed how the full obligatoriness of the content applicativization by *e-* may be historically explained. It will be an instantiation of a case in which a semantic change bringing about a full obligatoriness of applicativization does not happen on the side of a case-marker (or adposition) which originally could paraphrase it but instead happened on the side of the applicative marker itself.

Here I give an example of content applicativization by *e-* of the verb *mina* ‘laugh’ from *Yukar*, including repetitions from (190) in 6.2.1.2.1. In (220a), *mina* carries the applicative prefix *e-*, and doing so makes it possible for it to take a content argument, which is the person at which the act of laughing will take place. In this case, the applied argument is coded by zero-anaphora, the referent being mentioned explicitly in the preceding sentence. In (220b) and (220c), on the other hand, the combination of the locative postposition *ta* or *otta* and *mina* ‘smile’ fails to form a meaning of ‘laugh at’, instead forming the meaning of ‘have a smile on’, thus not being able to take a content argument.

(220) Ainu (isolate; Japan)

- a. *ponyaumpe shine okkai tapan, tunash tuye yan!*
 Ponyaumpe one be Thus quickly cut IMP
tunash raike yan! a-e-mina kusune na
 quickly kill IMP 1PL.INCL-laugh FUT DECL

‘Ponyaumpe is just a man. Cut him! Kill him! We will laugh at him.’

((Kannari & Kindaichi 1964: 111)

- b. *i-ko-hosari sancha ka ta mina kane*
 me-APPL-turn_around lips top at smile and

‘She looks back at me and has a smile on her lips and...’

(Kannari & Kindaichi 1966: 254)

- c. *kamui akor totto i-oshi sancha otta mina kane*
 god my mother her-behind lips at smile and

‘My holly mother has a smile on her lips and...’

(Kannari & Kindaichi 1964: 136-137)

From this fact, the following could be maintained. The content meaning of *e-* is

considered deriving from the meaning of ‘head’ or ‘there’ through semantic extension in the history. The locative postposition *otta*, which is historically decomposed into the relational noun *or* ‘place’ and the locative postposition *ta*, has not extended its meaning to content or theme. This could be associated with the likelihood that *otta* is a relatively new invention from its transparent internal structure (*or* ‘place’ plus *ta* ‘at’). However, because its historical syntactic head is *ta*, it should have inherited the meanings of *ta*. Moreover, the property of not being able to express a content or theme meaning is also shared by the (probably) older locative postpositions *ta*, *un*, and *ne*, although they are probably newer than the applicative markers.

Thus, it could be said that, the historical factor of fully-obligatory applicativization like this case originates from the fact that, generally, applicative affixes have undergone more semantic changes than the case-marker (or adposition)s or postpositions (especially postpositions) (cf. Kaiser 1997: 167). This is reasonable given that an affix in general is a highly grammaticalized element that has been exposed to a long history of change, while postposition and clitic are relatively new, relatively newly developed in that language out of an independent word source. Besides, the fact that Ainu has locative postpositions but lacks a content postposition supports the idea that content meaning generally arises from a case-marker (or adposition) with another meaning through semantic extension. In the future (if there are still Ainu speakers), the meaning of *ta*, *ne*, or *otta* could be extended so that it can express content or theme meaning, which is a semantic change the prefix *e-* is supposed to have undergone, then the content applicativization by *e-* will become optional applicativization, which can be paraphrased by means of the postposition that acquired the new meaning of content.

The same would apply to the case of Yucatec Maya theme or content applicativization in 6.2.1.2.3, even though it is not a fully-obligatory but base-conditioned obligatory case. My assumption is that the Yucatec Maya applicative suffix *-t* originates from the preposition *ti*, based on their phonological similarities, word order patterns, and the fact that some *-t* applicativization may be paraphrased using the preposition *ti* as shown in (199) in 6.2.1.2.4. The Ainu applicative prefix *e-* and the Yucatec Maya applicative suffix *-t* then could be said to have the properties in common that they can express content or theme meanings and that their sources are locative elements. Thus, the same semantic extension *e-* underwent perhaps could be assumed for Yucatec Maya *-t* as

well.

6.3.1.1.4 Summary

Established were three patterns of linguistic situations from which fully-obligatory applicative markers may develop, and I tried applying them to fully-obligatory applicative markers in my language sample. The important finding to note is that none of them clearly comes from case-marker (or adposition)s. Thus, I propose the following hypothesis:

(221) A generalization about the diachrony of fully-obligatory applicativization

When an applicative marker is a fully-obligatory applicative marker for all or some of its semantic roles, then its diachronic source may be likely to be a verb or a noun.

As discussed already, it is hardly doubtful that the Barupu suffixes, the Nahuatl suffixes, and Creek prefixes originate from verbs. The Ainu prefix *ko-*, which is a fully-obligatory applicative marker when the semantic role is recipient/beneficiary, may come either from the verb *kor* 'have' or from a postposition *ko*, but the former possibility is more likely. The origin of Ainu another applicative marker *e-*, which is a fully-obligatory applicative marker when the semantic role is content, may be either the noun *he* 'head' or adverb/postposition *e* 'there, at'. If it is the former which is the origin, this case is also compatible with my hypothesis that applicative markers coming from verbs or nouns are more likely to result in full obligatoriness than applicative marker coming from case-marker (or adposition)s are.

When the source of the applicative marker is a case-marker (or adposition), both may retain their original meanings so that paraphrase is still possible. This is compatible with the generalization (161) made in 5.2.1 in Chapter 5, repeated as:

(222) A correlation between an applicative marker with a cognate case marker (or adposition) and optionality of applicativization

When an applicative marker and a case-marker (or adposition) are clearly historically related, it is likely that they realize optional applicativization.

Now, I add another generalization:

(223) A correlation between the kind of source of applicative markers and presence of cognate case-marker (or adposition)

When the source of the applicative marker is not a case-marker (or adposition) but something like verb or noun, the source item is less likely to have a cognate case-marker (or adposition).

6.3.1.2 Diachronic scenario of the formation of base-conditioned obligatory applicativization

We saw that a base-conditioned applicative marker is attested at least in Yucatec Maya. As we saw, the verbs ‘laugh’ and ‘mock’ cannot take a theme argument by a preposition, unlike other verbs like ‘whistle’, and the applicativization by the suffix *-t* is the only means. As suggested there, the reason why some verbs can and other verbs cannot be grammatically combined with the same applicative marker for the same semantic role may be attributed to the differences in lexical semantics of the verbs. It further can be said that the differences could be in terms of the differences in the degrees of how transitive-like the verb is felt or of the differences in usage frequency.

In any case, a possible assumption is that the verbs rejecting case-marking paraphrase are in the way of lexicalization. Its only difference from lexicalization is whether there is semantic fusion between the base verb and the applicative marker. Another possibility is that the applicative marker is directed toward full obligatoriness, suggesting a situation in which verbs one by one become unable to take case-marked NPs of certain roles.

6.3.1.3 Diachronic scenario of the formation of feature-conditioned obligatory applicativization

Regarding the Maasai case of feature-conditioned obligatory applicativization discussed in 6.2.1, there are two possibilities about its diachronic background. The first is that, the oblique marker already existed and was used for both animate and inanimate arguments when the applicative suffix emerged or gained the beneficiary/goal meaning, and after then, the inanimate arguments got to be marked only by the applicative suffix. The second is that the oblique case-marker (or adposition) was a later development than

the benefactive/goal applicative suffix. Due to the poverty of instances, comparison with other feature-conditioned obligatoriness cases is difficult. In any case, however, why animate and inanimate are thus differentiated at all differentiated is ultimately in synchronic functional, and difficult to interpret in diachronic terms.

6.3.2 Diachronic scenario of the formation of lexical applicativization

During the time when the verb still existed as a free morpheme or when its lexicalization with the applicative marker was not progressed, case marking strategy may have been available in complement to the applicativization strategy because they expressed the same regular or non-idiomatic meaning. Once the colexicalization is complete and the verb is not existent, it is impossible for the verb not to carry the (an) applicative marker. Thus, it is impossible to compare that verb with the applicative marker and that verb without the applicative marker to examine whether there is promotion.

6.3.2.1 Diachronic scenario of the formation of non-deponent lexical applicativization

To obligatory applicative markers conditioned by the base verb can be offered a simple diachronic explanation. It is semantic fusion between the applicative marker and the base verb triggering idiomaticization. It is acknowledged that an applicative marker's meaning is likely to undergo some semantic change, semantic bleaching, or semantic generalization from its source adposition (Craig 1990: 129-130; Kaiser 1997: 167). Such semantic changes result in semantic conflicts between an applicative marker and its originally equivalent case-marker (or adposition), thus yielding contexts in which applicativization is obligatory.

What to be noted is that, so that this diachronic phenomenon could result in an obligatory applicative construction, it is necessary to block from happening a parallel semantic fusion between the base verb and a case-marker or adposition semantically compatible with the applicative marker. The tendency of this blocking is known as existent through the following two authors writing about Indo-European languages. First, Dewell (2011: 301) mentions that, in German, "prefixed verbs are relatively more apt than particle verbs to be lexicalized, i.e., to be recognized and selected at least partially as whole grammatical and semantic units". Second, Lehmann (2015b: 105-107) suggests

that, in Indo-European languages, semantic fusion is more likely to occur between a preverb and a verb than between an adposition and a verb, illustrating it by facts including the fact that, in Latin, preverbal usage of the preposition *inter* ‘between’ with the verb *facere* ‘do’ yields the verb *interfacere*, which means ‘kill’ (p. 106). As discussed in Nam (2017) and Zanchi (2019) in typological contexts, preverbs are parallel phenomena with applicative markers in general terms. The behavioral discrepancy mentioned just now between preverbs and particle/adposition counterparts thus can be applied to the relationship between applicative markers and adposition counterparts. Thereby, it is expected to explain the situational change whereby originally possible paraphrase of an applicative construction by means of a case-marker (or adposition) becomes impossible due to the fact that the resulting semantic relationships are different from each other.

6.3.2.2 Diachronic scenario of the formation of deponent lexical applicativization

The assumption is that, originally the base verb could be used as an independent word, then it could be combined with the applicative marker which existed contemporarily, and finally, because the applicative form of the verb was more frequently used than the independent form, the former survived and the latter came into disuse.

It is thought that there are varying degrees of semantic fusion between the base verb and the applicative marker. If the base verb and the applicative marker did not undergo significant semantic fusion, and there was a case-marker (or adposition) semantically compatible with the applicative marker, it means that the applicative marker possibly formerly functioned as an optional applicative marker when combined with that verb. If case-marking paraphrase was originally possible in that way, when the verb becomes unable to be used independently, it automatically eliminates the possibility of case-marking paraphrase, if the promotion in the original applicativization was obligatory.

7 Summary of the paraphrase and promotion in optional and obligatory applicativization

This chapter is meant to bring together the discussions in Chapter 5 and Chapter 6, that is, to show the whole picture of the phenomena concerned with paraphrase and promotion that take place in optional and obligatory applicativization.

7.1 Synchronic aspects

Thus far, about optionality and obligatoriness, the following things were shown:

- that introducing the concepts of obligatoriness/optionality/impossibility and semantic valency into the occurrence and nonoccurrence makes it possible to see applicativization without promotion as a type of applicativization.

- in what way different types of obligatoriness can be distinguished for obligatory applicativization

- in what way the concept of obligatory applicativization can capture grammatical obligatory applicative constructions and lexicalized applicative constructions in a uniformed way.

- which types of obligatoriness each of grammatical obligatory applicativization and lexical obligatory applicativization may have

- that lexical applicativization may be further divided into non-deponent and deponent ones.

Table 14 in the beginning of Chapter 5 is repeated again here, for summarizing the relevant issues:

Table 28. Types of applicativization in terms of optionality/obligatoriness of applicativization and optionality/obligatoriness/impossibility of promotion

Optional applicativization (paraphrase is possible)			Obligatory applicativization (both promotion and paraphrase are impossible)		
with obligatory promotion	with optional promotion	with no promotion option	fully-obligatory	conditionally-obligatory	
				role-conditioned / feature-conditioned / (socially-conditioned)	base-conditioned
grammatical applicativization				lexical applicativization	
				deponent	non-dep.

7.2 Diachronic aspects: rise and fall of applicative and corresponding adposition forms

So far, the fundamental axis of the discussion has been whether the applicativization is optional or obligatory. Here, I aim to establish a full-scaled model for the diachronic cycle that encompasses every possibility of how optional applicative constructions and obligatory applicative constructions emerge respectively. This is possible to do by taking the “paraphrase view” discussed in 2.4 in Chapter 2. Thus, the model proposed will show how rise and fall of applicative markers and case-marker (or adposition)s determine the value of paraphrasability of the applicative construction in a specific stage of synchrony. The focus will be on the cognancy relationship between applicative markers and case-marker (or adposition)s rather than the kinds of diachronic source of applicative markers.

Paraphrase by a cognate case-marker (or adposition) and paraphrase by a non-cognate case-marker (or adposition) of applicative constructions equally have several possible patterns for historical processes they could have undergone. The same applies to cases in which no non-applicative paraphrase is possible. Below, distinguishing four

possible synchronic statuses according to possibilities and impossibilities of non-applicative paraphrases by cognate case-marker (or adposition)s and non-cognate case-marker (or adposition)s, it will be discussed what historical changes each of them must have undergone to reach the status. The four statuses are: (A) cognate paraphrase is possible, (B) cognate paraphrase is impossible, (C) non-cognate paraphrase is possible, and (D) non-cognate paraphrase is impossible.

7.2.1 (A) When cognate paraphrase is possible

- (i) There was a cognate case-marker (or adposition) when the marker applicative arose (for example, the source was that case-marker (or adposition)) and it still survives with the meaning remaining the same as the applicative.
- (ii) There was not a cognate case-marker (or adposition) when the applicative marker arose, a case-marker (or adposition) arose later from the source of the applicative marker, and it still survives with the meaning remaining the same as the applicative.

7.2.2 (B) When cognate paraphrase is impossible

- (i) There was a cognate case-marker (or adposition) when the applicative arose (for example, the source was that case-marker (or adposition)), but it disappeared with concession of the function to the applicative or progressed phonological reduction.
- (ii) There was not a cognate case-marker (or adposition) when the applicative arose, and an adposition from the source of the applicative did not arise later or disappeared after arising later.
- (iii) There was a cognate case-marker (or adposition) when the applicative arose (for example, the source was that case-marker (or adposition)), but either the case-marker (or adposition) or applicative changed the meaning or applicability (concerned with conditioning by base, feature, or social factor) later.
- (iv) There was not a cognate case-marker (or adposition) when the applicative arose, and an adposition from the source of the applicative arose later, but either the adposition or applicative changed the meaning or applicability (concerned with conditioning by base, feature, or social factor) later.

7.2.3 (C) When non-cognate paraphrase is possible

- (i) There was a non-cognate case-marker (or adposition) (or another type of case-marker (or adposition)) with the same meaning when the applicative marker arose, and it still survives with the meaning remaining the same as the applicative.
- (ii) There was not a non-cognate case-marker (or adposition) with the same meaning when the applicative arose, and one arose later (through new emergence or semantic change) and still survives with the meaning consistent.

7.2.4 (D) When non-cognate paraphrase is impossible

- (i) There was a non-cognate case-marker (or adposition) with the same meaning when the applicative arose, but it disappeared (due to phonological reduction or becoming another appl).
- (ii) There was not a non-cognate case-marker (or adposition) with the same meaning when the applicative arose, and one did not arise later or disappeared after arising later.
- (iii) There was a non-cognate case-marker (or adposition) with the same meaning when the applicative arose, but either the adposition or applicative changed the meaning or applicability later.
- (iv) There was not a non-cognate case-marker (or adposition) (or another type of case-marker (or adposition)) with the same meaning when the applicative arose, and one arose later (through new emergence or semantic change), but either the adposition or applicative changed the meaning or applicability later.

Table 29 shows how this classification corresponds to the patterns discussed in 5.2 in Chapter 5 and 6.3 in Chapter 6:

Table 29. Correspondence between two ways of capturing the formation of optional and obligatory applicativization

Optional applicatives	Pattern #op1	(Ai) (Ci)
	Pattern #op2	(Aii) (Cii)
Grammatical obligatory applicatives	Pattern #ob1	(Bi) (Biii) (Di) (Dii) (Diii) (Div)
	Pattern #ob2	(Bi) (Bii) (Biii) (Biv) (Di) (Dii) (Diii) (Div)
	Pattern #ob3	(Bi) (Bii) (Biii) (Biv) (Di) (Dii) (Diii) (Div)

7.2.5 Formularization and discussion

Each pattern described above is formularized below. I put the applicative affix at issue as Y, a cognate case-marker or adposition as X, and a non-cognate case-marker or adposition as small x, whose applicative counterpart is put as small y. Dash (‘) is added in cases of semantic change (including also lexicalization)⁴⁷. Thus, the situation shift in each pattern can be formularized as follows. Arrow stands for a situation shift from what is depicted in the left column to what is depicted in its right column. Two symbols’ being in a single column (situation stage) means that they coexist in the language at the same time, so that paraphrase is possible as long as the meanings did not change to differ considerably⁴⁸.

⁴⁷ Note also that semantic change includes semantic extension whereby original meaning is sustained.

⁴⁸ Cases in which an applicative marker disappeared leaving a case-marker or adposition counterpart alone is not considered since our topic is applicatives. Such cases would be referred to as “fully-obligatory case-marking”.

(224) Model for diachronic interrelationship of applicative markers and case-markers or adpositions

(Ai) $X \rightarrow XY$

(Aii) $Y \rightarrow XY$

(Bi) $X \rightarrow XY \rightarrow Y$

(Bii) $Y \rightarrow Y$ or $Y \rightarrow XY \rightarrow Y$

(Biii) $X \rightarrow XY \rightarrow X'Y$ or $X \rightarrow XY \rightarrow XY'$

(Biv) $Y \rightarrow XY \rightarrow X'Y$ or $Y \rightarrow XY \rightarrow XY'$

(Ci) $x \rightarrow xY$

(Cii) $Y \rightarrow xY$

(Di) $x \rightarrow xY \rightarrow Y$ or $x \rightarrow xY \rightarrow yY$

(Dii) $Y \rightarrow Y$ or $Y \rightarrow xY \rightarrow Y$ or $Y \rightarrow xY \rightarrow yY$

(Diii) $x \rightarrow xY \rightarrow x'Y$ or $x \rightarrow xY \rightarrow xY'$

(Div) $Y \rightarrow xY \rightarrow x'Y$ or $x \rightarrow xY \rightarrow xY'$

There could perhaps be some missing and possible patterns, but it is thought to cover major patterns. Moreover, it is of course possible that more than one pattern is combined to make a longer history, whereby recursion of the same change is allowed, because the changes are cyclic. For which languages have which patterns, it will be helpful to investigate Chapter 7 and Chapter 8.

Stages obligatoriness at which we should look at are final stages in each pattern. And the present study is interested in in what ways the situations obligatory/non-obligatory can be formed in the history.

Optional applicative constructions are formed through one of the four patterns: (Ai), (Aii), (Ci), and (Cii). (Ai) and (Aii) depict cognate paraphrase, and (Ci) and (Cii) non-cognate paraphrase. Note that some optional applicative markers may be replaced either with a related case-marker/adposition or with an unrelated case-marker/adposition), satisfying conditions in both (A) and (C) (e.g., *Tukang Besi*, see 5.2.).

As discussed in 5.2.1, a cognate-sustained applicative marker is thought to be a relatively recent development. This is also based on the assumption that, once the source

of an applicative marker becomes a bound element and inseparable from the verb, it is impossible for the applicative marker to yield case-marker or adposition counterpart.

In (Aii), (Bii), and (Biv), an applicative affix does not arise from an adpositional source, and there was not a cognate adposition at all (note that (C) and (D) do not talk about origin of the applicative in question). This means that, as discussed in 6.3, it arises through noun incorporation or verb serialization or second grammaticalization of a causative marker where an adposition stage is not intervened. In first stages, they were obligatory applicative constructions.

Fully-obligatory applicative constructions are formed if and only if one of (Bi), (Bii), (Biii), and (Biv) on the one hand and one of (Di), (Dii), (Diii), and (Div) on the other hand hold together.

When applicative construction is thus obligatory, there are cases where the applicative verb is lexicalized and cases where it is not lexicalized. As discussed in 6.3, once applicative affix is lexicalized with the verb, it is difficult to have non-applicative paraphrase again, in that phrasal verbs are more resistant to lexicalization than preverbs (Dewell 2011; Lehmann 2015b).

Semantic change is also relevant to obligatoriness, in such a way that it is semantic change caused on an applicative or case-marker (or adposition) which had the same meaning that renders the paraphrase in (Biii), (Biv), (Diii), and (Div) impossible (again). However, it would be easier for these cases to regain optionality than cases of lexicalization, because originally compatible case-marker (or adposition)s may follow the same semantic changes, or there may arise a new case-marker (or adposition) with a similar meaning to the new meaning of the applicative marker, which does not seem to be possible for lexicalized applicative markers.

The disappearance of X is due to phonological reduction or concession of the function to the applicative counterpart.

Some patterns depict a possible advanced situation of another pattern, for example, the previous depiction of the history of (Bi) was like that of (Ai), meaning that (Ai) can be extended to (Bi) in the future. This shows how the model is cyclic, and the model thus shows different ways in which optional applicative constructions become obligatory applicative constructions and in which the opposite happens.

Finally, the model can be associated with discussions made in previous chapters.

First, it will help expand the picture further to apply the symbols Y, Y', y, and y' in (271) to the circles and ellipses in the right columns in the models for how systems of applicative markers develop in particular languages depicted in Table 6 in 3.5 in Chapter 3. Second, it also should be remembered that I gave a tentative explanation to the optionality/obligatoriness/impossibility of promotion in optional applicativization in 5.3 in Chapter 5 with reference to whether a semantically compatible case-marker (or adposition) is historically related or unrelated to the applicative marker. Another point that associates Chapter 5 and this chapter is that, once an applicative marker becomes fully-obligatory, the concept of promotion itself becomes unapplicable.

8 Multiple applicativization

Multiple applicativization refers to a state whereby more than one applicative marker occurs on a single verbal base. As Dixon (2012: 325) notices, multiple applicativization may be realized by a combination of different applicative markers or a recurrence of an identical applicative marker. I call the former “heterogenous” and the latter “homogenous”. Below, (225) is an example of heterogenous cases in Rwanda, in which the instrumental applicative suffix *-iish* and the locative applicative suffix *-ho* occur together on the verb. (226) is an example of homogenous cases in Kope, in which the generalized applicative prefix *(V)m-* occurs twice on the verb. Homogenous cases are quite rare: both Dixon (2012)’s data and my data detected only a few languages that have one. Heterogenous cases are much more common, despite the natural fact that they are only possible in multiple-applicative languages as discussed in Chapter 3.

(225) Rwanda (Niger-Congo; Rwanda/DRC)

umwáalimu *y-a-andik-iish-ijé-ho* *ikibááho* *imibáre* *íngwa*
teacher he-PST-write-INSTR-ASP-on board math chalk

‘The teacher wrote math on the blackboard with chalk.’

(Kimenyi 1980: 107)

(226) Kope (Kiwaian; Papua New Guinea)

nuu *go’ooto* *uubi* *boomoi* *i-m-om-ohau*
3S village people pig PA-APPL-APPL-come_out

‘He brought out the pig for the village people.’

(Clifton 1995: 54)

In the majority of the cases of multiple applicativization, whether heterogenous or homogeneous it is, functions of each applicative marker are the same as in ordinary applicativization, and the number of applicative markers on the verb is translated into the number of applied arguments. For example, in (225), the applied argument of *-iish* is *íngwa* ‘chalk’ and that of *-ho* is *ikibááho* ‘board’. An exceptional case will be mentioned for Ainu later.

This parameter is not taken into account frequently in typological or theoretical

discussions of applicative constructions. Its most noticeable typological discussion I recognize is found in Dixon (2012: 324-326), using the expression of “several applicatives together”. Zanchi (2019) discusses similar phenomena by Indo-European preverbs, “multiple preverbation”. To be consistent with Zanchi (2019)’s terminology, I will use the term “multiple applicativization”.

For languages which have applicative constructions, multiple applicativization is more often than not unreported. Of my sample languages, 13 were detected allowing multiple applicativization: Barupu, Taba, Mosestén, Warembori, Winnebago, Kope, Kashibo-Kakataibo, Shipibo-Konibo, Tukang Besi, Wolof, Rwanda, Maasai, and Ainu.

Table 30. Multiple applicativization and obligatoriness of applicative markers

Language	Heterogenous	Homogenous	Realization
Barupu	Yes	No?	suffixes (e.g., <i>-na-o-i</i> (three suffixes))
Taba	Yes	No	suffixes (<i>-Vk-o</i>)
Warembori	Yes	No	suffixes (e.g., <i>-ta-na</i>)
Tukang Besi	Yes	No	suffixes (<i>-ngkene-ako</i> , <i>-Vci-ngkene</i> , <i>-Vci-ako</i>)
Kope	No	Yes	prefixes (<i>Vm-Vm-</i>)
Winnebago	Yes	No	prefixes (<i>ho-gi-</i> , <i>hi-ho-</i> , <i>hi-ha-</i>)
Shipibo-Konibo	Yes	No	suffixes (<i>-kin-xon</i> , <i>-kin-naan</i>)
Kashibo-Kakataibo	Yes	No	suffixes (<i>-kin-xun</i> , <i>-anan-xun</i>)
Mosestén	Yes	No	suffixes (<i>-ye-ti</i> , <i>-tye-ti</i>)
Maasai	Yes	No	suffixes (<i>-ák-íé-</i> (with different allomorphs))
Wolof	No	Yes	suffixes (<i>-al-al</i>)
Rwanda	Yes	No	suffixes (lots of combinations)
Ainu	Yes	Yes (rare)	prefixes (<i>e-ko-</i> , <i>ko-e-</i> , <i>e-e-</i>)
Total: 13			

This chapter aims to find historical factors determining or relevant with in which languages multiple applicativization is possible or impossible. I will firstly hypothesize three factors for why multiple applicativization is possible in certain languages in 8.1. Then, in 8.2, multiple applicativization in each language in Table 30 will be discussed, mentioning how the three factors could be explanations. After that, in 8.3, it will be demonstrated whether the factors can be admitted actually functioning. 8.4 offers a summary.

8.1 Three possible factors

As major possible explanations for why multiple applicativization is possible in certain languages, I assume the following three factors:

Factor 1: Obligatoriness of the applicative markers

For multiple applicativization to be realized, it is necessary that two or more relations choose an applicative strategy over a flagging strategy at the same time. If an applicative marker is an optional one, one has to decide between the two strategies. However, if an applicative marker is an obligatory one, the applicative strategy is chosen by default, so that it suffices to add there only one more applicative marker to realize multiple applicativization. If both relations can be expressed only by obligatory applicative markers in that language, then it directly leads to multiple applicativization. Therefore, I suppose that obligatoriness of applicative markers could facilitate the realization of multiple applicativization.

Factor 2: Verbal origins of the applicative markers

I suppose that, in general, verbs could be likely to be serialized with each other than adpositions are. This means that, if applicative markers developing from verbs retain verbal properties, they will more easily be used together on a verb than those developing from adpositions. Also, it is consistent with the assumption discussed in 6.2.1 that fully-obligatory applicative markers often come from verbs.

Factor 3: Applicative-causative isomorphism

If multiple applicativization is not that common due to restraint of using more than one

applicative markers together, this will be solved if one of the applicative markers may be interpreted as a causative marker as well as an applicative marker, a phenomenon receiving labels like “applicative-causative isomorphism” (e.g., Malchukov 2017).

8.2 Description

8.2.1 Winnebago

In the Winnebago example in (274), two applicative prefixes are involved: the dative applicative *gi-* and the inessive applicative *hu-*. The applied argument (in this case, of a possessor role) of *gi-* is realized by the person marker *un-*, while that of *hu-* is realized as the free NP *homink-ra*.

(227) Winnebago (Siouan; Midwestern United States)

homink-ra hu-un-ra-gi-mink-shannan. < *o-in-...*

bed-DEF INESSIVE-1OBJ-2SUBJ-DAT-lie-DECL

‘You lay (down) on my bed.’

(Craig & Hale 1988: 331)

Although *-ho* is known as an optional applicative marker, the optionality and obligatoriness of the other Winnebago applicative markers are unknown. Although the origin of *gi-* is said to be the adverb *e’gi* ‘here’ (Lipkind 1945: 52), it is unknown where the other applicative markers come from, including *hu-* (~ *ho-*). No homogeneous case and no applicative-causative isomorphism are reported for this language.

8.2.2 Wolof

Wolof has two applicative markers both of which are suffixes: *-al* and *-e* (e.g., Dione 2013). The Wolof multiple applicativization is a homogeneous case, in which the same applicative suffix *-al* occurs twice in sequence on a single verbal base. It should be noted that *-al* has applicative-causative isomorphism, whose effect can be applicative-like and causative-like at the same time. If the first *-al* in (228) is interpreted to be a locative, comitative or instrumental applicative marker, then, the construction could be read as ‘Faatu run in/together with/by means of the car for Móodu’, meaning ‘Faatu made the car run for Móodu’. The second *-al*, according to the original gloss, functions as a benefactive applicative marker with its applied argument Móodu. In contrast, if the first *-al* is

interpreted to be a causative marker, then, the construction could be read as ‘Faatu made the car run for Móodu’. Both pieces of the interpretation end up by having the same meanings of ‘Faatu drove for Móodu’, and the recognition that *-al* is somewhat causative-like could contribute to the realization of *-al-al* itself. Note also that Wolof has an unrelated well-grammaticalized causative marker (Dione 2013).

(228) Wolof (Niger-Congo; Gambia/Senegar)

Faatu daw-al-al Móodu woto bi
 Faatu run-CAUS-APPL Móodu car the
 lit., ‘Faatu made the car run for Móodu.’
 ‘Faatu drove for Móodu.’

(Dione 2013: 2)

As discussed in 6.2.1.2.1 in Chapter 6, *-al* is a role-conditioned obligatory applicative marker, which is obligatory when the semantic role is recipient/beneficiary due to the absence of a semantically compatible case-marker (or adposition). It should be noted here that one of the two applied arguments in each of (228) is recipient/beneficiary. Thus, it may partly explain why multiple applicativization takes place. To sum up, although I am ignorant of the origin of *-al*, explanations for how *-al* can realize homogeneous multiple applicativization could be found in its obligatoriness and applicative-causative isomorphism.

8.2.3 Rwanda

Kimenyi (1980) provides plentiful examples of multiple applicativization in Rwanda. The Rwanda applicative markers are: the instrument *-eesh* (~ *-iish*), the possessor *-er* (~ *-ir*, *-e*, *-i*), the manner *-an*, goal *-ir* (~ *-iz*), locative *-mo* (~ *-ho*, *-yo*). Below are examples available from Kimenyi (1980). It can be seen that the following combinations are possible: *-iish-ho*, *-iish-iz*, *-iish-ir*, *-i-mo*, *-i-ho*, *-an-mo*, and *-an-ir*, all being heterogeneous cases.

(229) Rwanda (Niger-Congo; Rwanda/DRC)

umwáalímu y-a-andik-iish-ijé-ho ikibááho imibáre íngwa

teacher he-PST-write-INSTR-ASP-on board math chalk

‘The teacher wrote math on the blackboard with chalk.’

(Kimenyi 1980: 107)

b. *u-ra-andik-iish-ir-iz-a* *iyó kárámu iki*
you-PRES-write-INSTR-APPL-ASP that pen what

‘Why are you writing with that pen?’

(Kimenyi 1980: 109)

c. *umuhuúngu y-a-andik-iish-ir-ije* *umukoóbwa ibárúwa ikárámu*
boy he-PST-write-INSTR-APPL-ASP girl letter pen

‘The boy wrote the letter with the girl’s pen.’

(Kimenyi 1980: 110)

d. *úmwáana y-a-andik-i-yé-mo* *umugabo igitabo izíná rye*
child he-PST-write-APPL-ASP-in man book name of.him

‘The child wrote in the man’s book his name.’

(Kimenyi 1980: 112)

e. *úmwáana y-iicar-i-yé-ho* *íntebe umugabo*
child he-sit-APPL-ASP-on chair man

‘The child is sitting on the chair for the man.’

(Kimenyi 1980: 113)

f. *umugabo a-rá-kor-an-á-mo* *ibiro ingofero akazi*
man he-PRES-work-with-ASP-in office hat job

‘The man is working in the office with a hat.’

(Kimenyi 1980: 115)

g. *umugóre a-ra-som-an-ir-a* *umukoóbwa índorerwámo*
woman she-PRES-read-with-APPL-ASP girl glasses

ibárúwa

letter

‘The woman is reading the letter with the girl’s glasses.’

(Kimenyi 1980: 116)

Among the applicative suffixes, only *-iish* has an applicative-causative isomorphism (Kimenyi 1988). However, it is unknown whether *-iish* can occur twice on a single verbal base as Wolof *-al* does to instantiate a homogeneous case. As suggested in Chapter 5, the

Rwanda applicative suffixes are all optional applicative markers, so that obligatoriness cannot explain this individual case. The origins of the Rwanda applicative suffixes are unknown to me. Consequently, the Rwanda case is difficult to explain.

8.2.4 Maasai

Of the three applicative markers in Maasai, two can constitute multiple applicativization: *-aki* (~ *-oki*) and *-ie*. (Lamoureaux 2004):

(230) Maasai (Nilo-Saharan; Kenya/Tanzania)

a. *k-i(n)du'rr-aki^n-yiè* *en-gárrì* *ol-doyníó*

D-2SG-move-DAT-INST F.SG-car-ACC M.SG-mountain.ACC

‘You will use the car to move to the mountain.’

(Lamoureaux 2004: 94)

b. *é-ísu'j-áki^n-yié* *en-kítok* *in-kilání*

3-wash-DAT-INST F.SG-woman.NOM F.PL-clothes.ACC

o-reyiet *ol-payían*

M.SG-river.ACC M.SG-man.ACC

‘The woman uses the river to wash clothes for the man.’

(Lamoureaux 2004: 94)

c. *ε-id-ák-íé* *ɔl-páyìàn* *enk-áyoni* *enk-áré*

3-jump-DAT-INST M.SG-man.NOM F.SG-boy.ACC F.SG-water.ACC

‘The man has made the boy jump the water.’

(Lamoureaux 2004: 94)

d. *á-ur-oki^n-yiè* *ɔl-payían* *ɔl-pánkà*

1SG-make.fall-DAT-INST M.SG-man.ACC M.SG-machete.ACC

il-paék

F.PL-corn.ACC

‘I will use the machete to bend corn for the man.’

(Lamoureaux 2004: 94)

The applicative suffixes’ origins are unknown to me. However, causative readings are possible for each of (230a), (230b), and (230c), by conceiving the situations of “make the car move”, “makes the river wash”, and “make the machete bend corn”, respectively,

leaving the possibility that this applicative-causative isomorphism could facilitate the multiple applicativization.

8.2.5 Shipibo-Konibo

In Shipibo-Konibo (Valenzuela 2010), which has three applicative markers all of which are suffixes, multiple applicativization is possible with the two patterns of: *-kin-naan* and *-kin-xon*.

(231) Shipibo-Konibo (Panoan; Peru/Brazil)

- a. *beso-n jawen bake jato-n nonti yoká-ti*
 beso-ERG POS3 child:ABS 3P-GEN canoe ask-INF
raan-a-ra e-n yoká-kin-naan-tan-ke
 send-PP2-EV 1-ERG ask_for-ASSOC-MAL-go_and_return-CMPL

‘Beso_i sent his son_j to ask for their canoe, and I accompanied him_j to do it to their detriment (probably they did not want to lend their canoe).’

(Valenzuela 2010: 141)

- b. *e-n-ra rono shinan-kin-xon-ke [mia*
 1-ERG-EV rono:ABS think-ASSOC-BEN-CMPL 2:ABS
jaská-a-kin a-xon-tij
 so-do.T-SSSA do.T-BEN-INF

‘I gave Rono the idea so that he made it that way for you.’

(Valenzuela 2010: 141)

- c. *e-n-ra Tsoma nonti robi-kin-xon-ai*
 1-ERG-EV Tsoma:ABS canoe:ABS praise-ASSOC-BEN-INC
Wexá betan
 Wexá COM

‘I praise the canoe for Tsoma with WexA.’

(Valenzuela 2010: 141)

- d. *e-n-ra Wexá Tsoma nonti*
 1-ERG-EV Wexá:ABS Tsoma:ABS canoe:ABS
rabi-kin-xon-ai

praise-ASSOC-BEN-INC

‘I praised the canoe for Tsoma with Wexá.’

‘I praised the canoe with Tsoma for Wexá.’

(Valenzuela 2010: 141)

As discussed in 6.2.1.1.3, *-naan* and *-xon* are fully-obligatory applicative markers, with no case-marker (or adposition)s replaceable with them. Thus, when *-kin* is used, multiple applicativization is unavoidable if one wants to add a malefactive or benefactive participant. Another thing is that *-kin* has an applicative-causative isomorphism (Valenzuela 2002; 2010): in (231a) for example, if a causative reading is applied to *-kin*, the literal meaning will be ‘made him go and return’ instead of ‘accompanied with him’, and this multiple applicativization may be interpreted to be a combination of a causative marker and an applicative marker. The origins of the applicative suffixes are unknown to me, and no homogenous case is reported.

8.2.6 Kashibo-Kakataibo

Kashibo-Kakataibo is a closely related language to Shipibo-Konibo, and have three applicative markers all of which are suffixes which are apparently cognate with the Shipibo-Konibo ones, based on Zariquiey Biondi (2018). Kashibo-Kakataibo multiple applicativization seems to have some restrictions in combining different applicative suffixes; in terms of the affix order, *-xun* always appears after the other applicative suffix (Zariquiey Biondi 2018):

(232) Kashibo-Kakataibo (Panoan; Peru)

a.	<i>‘ën</i>	<i>kana</i>	<i>Wilton</i>	<i>ain</i>	<i>bëchikë</i>
	<i>‘ë=n</i>	<i>kana</i>	<i>Wilton</i>	<i>ain</i>	<i>bëchikë</i>
	1SG=A	NAR.1SG	Wilton.ABS	3SG.GEN	son.ABS
	<i>tëkinxunti</i>	<i>‘ain</i>			
	<i>të-kin-xun-ti</i>	<i>‘ain</i>			
	work-ASSOC-BEN-NOM	be.1/2P			

‘I will work with his son for Wilton.’

(Zariquiey Biondi 2018: 686)

- b. *Emilionën ka Wilton bananaanxuanxa*
Emilio=n ka Wilton bana-anan-xun-a-x-a
 Emilio=ERG NAR.3P Wilton.ABS speak-MAL-BEN-PERF-3P-NON.PROX
 ‘Emilio spoke against Wilton.’

(Zariquiey Biondi 2018: 687)

Zariquiey Biondi (2018: 687) says that “the combination of *-anan* ‘malefactive’ and *-xun* ‘benefactive’ is used in order to express a malefactive meaning in association with an intransitive predicate. That is, without *-xun* ‘benefactive’, *-anan* ‘malefactive’ cannot appear on an intransitive predicate”. From this remark, it can be understood that the sequence of *-anan-xun* as a whole could possibly be analyzed as a malefactive applicative marker. As discussed in 6.2.1.1 in Chapter 6, it is likely that *-anan* is a fully-obligatory applicative marker, and *-xun* may be seen as a nearly-obligatory applicative marker which can be replaced with a case-marker (or adposition) but only rarely. The origins of the applicative suffixes are unknown to me. Thus, both examples (232a) and (232b) could be explained by the dependency of *-anan* and the obligatoriness of *-anan* and *-xun*. No homogeneous case is reported.

8.2.7 Ainu

Ainu allows multiple applicativization by two out of its three applicative markers: the prefixes *e-* and *ko-* (e.g., Bugaeva 2010). Bugaeva (2010) refers to this phenomenon as “double applicative”. Although Ainu has the third applicative marker *o-* too, to my knowledge, only *e-* and *ko-* can participate in multiple applicativization, with two possible affix orders: *e-ko-* and *ko-e-*. According to Bugaeva (2010: 785), the following usages were attested in the colloquial speech:

(233) Ainu (isolate; Japan)

e-ko-caranke ‘argue with sb about sth’

e-ko-sunke ‘deceive sb over sth’ (*sunke* ‘lie’)

e-ko-yayirayke ‘be grateful to someone for sth’

e-ko-imoko-kor ‘take sth as a gift to sb’ (Instrument, Recipient)

e-ko-iyok ‘sell sth to sb’ (Instrument, Recipient)

e-ko-sikkasma ‘store sth for sb’ (Instrument, Recipient)

e-ko-so-uk ‘borrow sth from sb’ (Instrument, Source)

ko-e-rayap ‘be delighted with sb about sth’

ko-e-unpipka ‘doubt sth of sb’

ko-e-yukar ‘imitate sb in sth’

ko-e-ikka ‘steal sth/sb from sb’ (Source, Instrument)

(Bugaeva 2010: 785)

In the example (234) from *Yukar* below, the applied argument of *e-* is *wen toi kanto* ‘the waste grave field’, and those of the two pieces of *ko-* are *kamui turano* ‘the gods’ and *iwor turano* ‘the mountains’ respectively. Note that the applied arguments of *ko-* have not undergone a promotion (each followed by a postposition *turano* ‘with’).

(234) Ainu (isolate; Japan)

<i>ene-an</i>	<i>a</i>	<i>kotan</i>	<i>kamui</i>	<i>turano</i>
thus-be	PST	village	god	with
<i>iwor</i>	<i>turano</i>	<i>wen</i>	<i>toi</i>	<i>kanto</i>
mountains	with	bad	grave	field
<i>e-ko-kirukar</i>	<i>ru</i>	<i>tap</i>	<i>eashir</i>	<i>a-nukar</i>
APPL-APPL-overturn	part	now	exactly	I-see

‘Only now I saw ruins of the village, which turned over with the gods and mountains on the waste grave field, which once existed in that way.’

(Kannari & Kindaichi 1965: 303-304)

In some instances, two applied arguments not clearly distinguishable are involved. In (235a), applied arguments of *ko-* and *e-* are somewhat ambiguous, and it seems that they point to a shared locative argument: *imi noshke* ‘the middle part of the Japanese clothes’. The same seems to apply to (235b).

(235) Ainu (isolate; Japan)

a.	<i>tapup-ka</i>	<i>wa</i>	<i>ratki</i>	<i>etor</i>
	shoulder-top	from	suspended	bell
	<i>imi</i>	<i>noshke</i>	<i>chi-ko-e-tuye</i>	
	Japanese_clothing	middle	PSS-APPL-APPL-cut	

‘The bell hanging down from the top of his shoulders reaches the middle part of the clothes.’

(Kannari & Kindaichi 1963: 56)

b.	<i>imi</i>	<i>noshke</i>	<i>wa</i>
	Japanese_clothing	middle	from
	<i>ratki</i>	<i>etor</i>	<i>imi</i>
	suspended	bell	Japanese_clothing
	<i>chinki</i>	<i>chi-ko-e-sai-pa-p</i>	<i>ko-shi-tom-muye</i>
	edge	PSS-APPL-APPL-coil-PL-NMLZ	APPL-REF-body-surround
	‘The bell hanging down from the middle part of the clothes coils the edge of the clothes and wraps his body.’		

(Kannari & Kindaichi 1963: 57)

Finally, I found an example of homogenous multiple applicativization, whereby *e-* occurs twice, with two applied arguments supposable: *sannan-u* ‘her face’ and ‘the treasure’ (by zero anaphora):

(236) Ainu (isolate; Japan)

<i>monak</i>	<i>pirika-p</i>	<i>sui</i>	<i>machi-kor</i>	<i>nubek</i>	<i>kamui</i>	<i>sannan-u</i>
originally	beautiful-NMLZ	again	woman-POSS	light	god	face-CSTR
<i>e-e-maknatara</i>						
APPL-APPL-shine						

‘The outstandingly beautiful woman had light on her face from the treasure’

(Kannari & Kindaichi 1959: 95)

As discussed in 6.2.1.2.1, both *e-* and *ko-* are role-conditioned obligatory applicative markers. Especially, the examples Bugaeva (2010: 785) presents appear to include semantic roles which only can be expressed by applicativization in Ainu, e.g., theme semantic roles in *e-ko-yayirayke* ‘be grateful to someone for sth’ and *ko-e-rayap* ‘be delighted with sb about sth’. To the best of my knowledge, no Ainu applicative markers have applicative-causative isomorphism. As discussed in 6.3.1.1.3, the origin of *e-* is either the noun *he* ‘head’ or the adverb *e* ‘there’, and that of *ko-* is presumably the verb *kor* ‘have’. If *e-* is an incorporation of the adverb *e* ‘there’ or *ko-* is an incorporation of the verb *kor* ‘have’, the productivity of incorporation in Ainu could be an explanation for

how multiple applicativization is possible in Ainu.

8.2.8 Mosestén

In Mosestén, the reason applicative prefix *ti-* only can be used with another applicative affix, inevitably causing a multiple applicativization (Sakel 2004). This is reminiscent of the Kashibo-Kakataibo case, in which, in intransitive predicates, the malefactive meaning only can be expressed by combining *-anan* and *-xun*. Sakel (2004) describes combinations with *-yi* and *-tye*:

(237) Mosestén (Mosestén-Chon; Bolivia)

a. *yae ya'-i-ye-ti-te iits nanatyi'*

1SG buy-VI-APY-REA-3M.O DE.M boy

'I buy it for the boy.' (because he has no money or because he is unable to buy it)

(Sakel 2004: 324)

b. *tsin ya'-i-tye-ti-te jiri-s waka ya'-i-dye-si' shiish*

1P buy-VI-APD-REA-3M.O one-F cow.E buy-VI-B-L.F meat

'We have bought a cow from someone (we know what to do with it) in order to sell meat.'

(Sakel 2004: 325)

8.2.9 Taba

The Taba applicative markers: *-(V)k* and *-o*, can realize multiple applicativization (Bowden 1997). In the following example, the applied argument of *-o* is *yan* 'fish', and that of *-ik* is *yak* 'me'.

(238) Taba (Malayo-Polynesian; Indonesia)

si lwagiko yak yan

si l=wag-ik-o yak yan

3PL 3PL=wag-APPL-APPL 1SG fish

'They sold me fish.'

(Bowden 1997: 249)

The Taba applicative markers are optional applicative markers as discussed in Chapter 5,

so that obligatoriness explanation fails to be applied. The origins of the Taba applicative suffixes are unknown to me. No applicative-causative isomorphism and no homogenous case are reported. Thus, it is difficult to explain this case.

8.2.10 Tukang Besi

In Tukang Besi, which has three applicative markers all of which are suffixes, multiple applicativization (“double applicative constructions” in Donohue (1999b)’s term) is possible as far as the following limitation of suffix combination allows (Donohue 1999b):

Table 31. Tukang Besi double applicative constructions

1st \ 2nd	<i>-ngkene</i>	<i>-ako</i>	<i>-(VC)i</i>
<i>-ngkene</i>	-	+	-
<i>-ako</i>	-	-	-
<i>-(VC)i</i>	+	+	-

(Donohue 1999b: 247)

Table 32. Tukang Besi double applicative combinations

1st \ 2nd	Ag	Dat	Instr
Ag	-	+	-
Loc	+	+	+

(Donohue 1999b: 247)

(239) Tukang Besi (Malayo-Polynesian; Indonesia)

no-wila-ngkene-ako te ina-no te Wa Ki'i

3R-go-COM-APPL CORE mother-3POSS CORE Wa Ki'i

‘She went with Wa Ki’i for her mother.’

(Donohue 1999b: 248)

In (239) above, *-ngkene* is a comitative applicative suffix with its applied argument *te ina-no* ‘his mother’ and *-ako* is a benefactive applicative suffix with its applied argument *te Wa Ki’i*. All the Tukang Besi applicative markers are optional applicative markers as discussed in Chapter 5, so that obligatoriness fails to explain the possibility of multiple applicativization. One factor enabling multiple applicativization in Tukang Besi could be found in the fact that the Tukang Besi applicative markers have verbal properties, as

discussed in 1.1 in Chapter 1. I suspect that the sequence of two applicative suffixes could historically correspond to the serial verb construction where the original two verbs are involved. No applicative-causative isomorphism and no homogeneous case are reported.

8.2.11 Warembori

Regarding Warembori, Donohue (1999a) mentions “an exceptional example of an applicative and a serial verb construction, with a further applicative, and several incorporations”, cited below. It can be seen that the availability of multiple applicativization in Warembori is on a par with the productive use of incorporation in general in this language (a property that can be seen in Donohue 1999a).

(240) Warembori (Lower Mamberamo; Papua)

a-wambe-mena-yave-ta-ra-na-e-me-yave

2SG-chase-dog-DEF-APPL-go-APPL-1SG-house-DEF

‘You chased the dog to (inside) my house.’

(Donohue 1999a: 50)

Donohue (1999a: 36) also mentions that “it is not possible to have two applicative morphemes referring to the same semantic role (one for clarificatory purposes)”:

(241) Warembori (Lower Mamberamo; Papua)

**a-rapen-na-wi-ta wa-ro*

2SG-fall-APPL-2SG-APPL canoe-IND

‘You fell on that canoe.’

(Donohue 1999a: 36)

To me, as discussed in 4.3.2 in Chapter 4, it seems to be plausible that the applicative suffixes *-na* and *-ta* are related with the prepositions *nana* and *ta* respectively. Meanwhile, I consider that what makes multiple applicativization in Warembori possible could be the productivity of incorporation rather than the possible adpositional origins of the applicative suffixes. The applicative suffixes are optional, owing to the existence of those adpositions. No applicative-causative isomorphism and no homogeneous case are reported.

8.2.12 Barupu

Barupu (Donohue 2003) is exceptional in that even three applicative suffixes can occur together. In (242), the applied argument of *-na* is *naki* ‘the dog’, that of *-o* is ‘you’, and that of *-i* is ‘him’:

(242) Barupu (Skou; Papua New Guines)

naki k-en-ore-na-ka-n-o-mu-n-i-a.

dog R-look-APPL-3SG.M-1SG-DAT-2SG.F-1SG-with-3SG.M

‘I looked for the dog with him for you.’

(Donohue 2003: 136)

As discussed in 6.3 in Chapter 6, the Barupu applicative markers show some verbal properties, reflecting their origins in serial verbs (Donohue 2003). This means that the sequence involving the three applicative suffixes and indexing suffixes for each applicative argument could be seen historically as a sequence of three verbs and their objects, so that the possibility of arranging three sets of verb-object combinations as a serial verb construction could have led to the possibility of the three applicative suffixes and their indexing suffixes in sequence. Also, as discussed in 6.2.1.1 in Chapter 6, the Barupu applicative suffixes are all fully-obligatory applicative markers. No applicative-causative isomorphism is known, and no homogenous case is reported. Consequently, the reason why multiple applicativization even allowing three markers on a verb is possible in Barupu could be found in the verbal origins and obligatoriness of the markers. Finally, the abundance of the applicative markers the language has may also be a contribution to it.

8.2.13 Kope

Clifton (1995) mentions the following construction in Kope as having the applicative prefix *Vm-* twice on a verb, according to which ‘village people’ is a beneficiary and ‘pig’ is an undergoer. Thus, it may be seen as a homogeneous case.

(243) Kope (Kiwaian; Papua New Guinea)

nuu go'ooto uubi boomoi i-m-om-ohau

3S village people pig PA-APPL-APPL-come_out

‘He brought out the pig for the village people.’

(Clifton 1995: 54)

However, one of the two pieces of *Vm-* could have a causative reading. For, that which Clifton (1995: 59) describes as “caused undergoer” applicativization by *Vm-* seems to me to be causativization, as also suggested by Schulz & Petterson (2022: 116). By the causative reading, the literal meaning will be ‘he made the pig come out for the village people.’ Moreover, Kope does not have markers for indirect objects (Clifton, personal communication, 2021), suggesting that the dative applicative prefix *Vm-* may be a fully-obligatory applicative marker. About the origin of *Vm-*, the only fact I recognize that it was formerly distinct two applicative markers (Clifton 1995). Consequently, the reason why *Vm-* allows homogeneous multiple applicativization could be found in its applicative-causative isomorphism and obligatoriness.

8.2.14 Summary

The synchronic nature of multiple applicativization observed above can be summarized as follows:

- It was shown that both applicative prefixes and applicative suffixes can fulfill multiple applicativization.
- In most cases, if a language has multiple applicativization and has more than one applicative marker, not every applicative marker is available for multiple applicativization in that language.
- In many cases, the affix order is fixed.
- The possibility of homogeneous case is more limited than heterogeneous case.
- The maximum of the number of applicative markers in multiple applicativization recognized here is three.
- Cases could not be detected where a prefix and a suffix co-occur: neither Mosestén and Maricopa (which have both types of applicative markers, see Chapter 4) do not appear to have multiple applicativization.

8.3 Demonstration of the three hypothetical factors

8.3.1 Obligatoriness of applicative markers

In Chapter 6, different types of obligatory applicative markers were distinguished according to natures and degrees of obligatoriness. Out of them, fully-obligatory applicative markers, role-conditioned applicative markers, and nearly-obligatory applicative markers will be discussed in light of multiple applicativization, to seek for a correlation between obligatoriness of applicativization and multiple applicativization. This is because it is possible that there are many cases of base-conditioned and feature-conditioned obligatory applicative markers I could not find in sample languages.

As discussed in detail in 6.2 in Chapter 6, fully-obligatory applicative markers and role-conditioned applicative markers recognizable in my sample are as follows:

Table 33. Fully-obligatory applicative markers

Language	Applicative marker
Southern Sierra Miwok	<i>-na, -nY, -pa, -tuku</i>
Shipibo-Konibo	<i>-xon, -(V)naan ~ -(V)n</i>
Kashibo-Kakataibo	<i>-anan</i>
Barupu	<i>-ya, -ke, -ta, -na, -i, -e, -o⁽¹⁾, -o⁽²⁾</i>
Nahuatl	<i>-lia (~ -ia, -i, -huia)</i>
Kope	<i>Vm-</i>

Table 34. Role-conditioned obligatory applicative markers

Language	Applicative marker
Wolof	<i>-al</i>
Creek	<i>im-, is-</i>
Ainu	<i>e-, ko-</i>
Yucatec Maya	<i>-t</i>
Southeastern Tepehuan	<i>-(i)dya</i>

It is expected that these languages could be more likely to have a multiple applicativization than the languages with applicative markers which are optional only. In fact, multiple applicativization is available in 6 out of the 11 languages: Shipibo-Konibo,

Kashibo-Kakataibo, Barupu, Kope, Wolof, and Ainu. See Table 35:

Table 35. Multiple applicativization and obligatoriness of applicative markers⁴⁹

Language	Heterogenous	Homogenous	Realization	Obligatoriness of appl. affixes involved
Barupu	Yes	No?	suffixes (e.g., <i>-na-o-i</i> (three suffixes))	all the 8 suffixes are fully-obligatory
Taba	Yes	No	suffixes (<i>-Vk-i</i>)	all are optional
Warembori	Yes	No	suffixes (e.g., <i>-ta-na</i>)	all are optional
Tukang Besi	Yes	No	suffixes (<i>-ngkene-ako</i> , <i>-Vci-ngkene</i> , <i>-Vci-ako</i>)	all are optional
Kope	No	Yes	prefixes (<i>Vm-Vm-</i>)	fully-obligatory
Winnebago	Yes	No	prefixes (<i>ho-gi-</i> , <i>hi-ho-</i> , <i>hi-ha-</i>)	<i>ho-</i> is optional
Shipibo-Konibo	Yes	No	suffixes (<i>-kin-xon</i> , <i>-kin-naan</i>)	<i>-xon/-naan</i> are obligatory
Kashibo-Kakataibo	Yes	No	suffixes (<i>-kin-xun</i> , <i>-anan-xun</i>)	<i>-xun</i> is nearly-obligatory
Mosetén	Yes	No	suffixes (<i>-ye-ti</i> , <i>-tye-ti</i>)	<i>-ti</i> has to occur with another appl. affix.
Maasai	Yes	No	suffixes (<i>-ák-íé-</i> (with different allomorphs))	<i>-áki</i> (~ <i>-okí</i>) is conditionally obligatory
Wolof	No	Yes	suffixes (<i>-al-al</i>)	<i>-al</i> is

⁴⁹ For references and discussion of the optionality of each applicative marker, see Chapter 5.

				conditionally obligatory
Rwanda	Yes	No	suffixes (lots of combinations)	all are optional
Ainu	Yes	Yes (rare)	prefixes (<i>e-ko-</i> , <i>ko-e-</i> , <i>e-e-</i>)	<i>e-/ko-</i> are conditionally obligatory
Total: 13				

As already shown in Chapter 6, 24/127 applicative markers proved to be fully-obligatory or role-conditioned obligatory in my sample. Of them, 15/24 applicative markers appear in Table 30 and Table 35 by being able to cause multiple applicativization.

The only missing languages from my sample with fully-obligatory applicative markers in Table 35 are Southern Sierra Miwok and Nahuatl. However, Nahuatl has only one applicative marker, making it difficult to use multiple applicativization in the first place. For that, homogeneous pattern is the only possible choice, but from Table 30 it can be seen that homogeneous patterns are generally more difficult to occur than heterogenous patterns. As for Southern Sierra Miwok, the meanings of the applicative affixes are confined to benefactive and malefactive, so that the reason why no multiple applicativization is reported could be attributed to this fact too.

The only missing languages from my sample with role-conditioned applicative markers are Creek, Yucatec Maya, and Southeastern Tepehuan. However, as Table 34 shows, Yucatec Maya and Southeastern Tepehuan have only one applicative marker respectively. Thus, for the same reason discussed regarding Nahuatl above, it can be seen that multiple applicativization would be difficult for those languages to realize from the first place. As for Creek, I cannot find the sequences *im-is-* or *is-im-* from the literature, and probably Creek lacks multiple applicativization, which is the only recognizable exception.

Consequently, the following generalization holds:

(244) A correlation between obligatory applicative markers and multiple applicativization

If an applicative marker is a fully-obligatory applicative marker, and multiple meanings are expressible by applicativization in that language, then the applicative marker may be likely to allow a multiple applicativization.

8.3.2 Verbal origins

In 6.3 in Chapter 6, it was shown that obligatory applicative markers might tend to be of verbal or nominal origins. Now that it is clear that obligatory applicative markers are likely to participate in multiple applicativization, it can be said that there could be a tendency whereby applicative markers of verbal or nominal origins readily participate in multiple applicativization. As this cannot be directly proved due to the poverty of the sample, it is left tentative at present (see Table 36 below).

Table 36. Multiple applicativization and origins of the applicative markers

Language	Heterogenous	Homogenous	Realization	Origin of the applicative markers
Barupu	Yes	No?	suffixes (e.g., <i>-na-o-i</i> (three suffixes))	verbs
Taba	Yes	No	suffixes (<i>-Vk-i</i>)	(unknown)
Warembori	Yes	No	suffixes (e.g., <i>-ta-na</i>)	adpositions?
Tukang Besi	Yes	No	suffixes (<i>-ngkene-ako</i> , <i>-Vci-ngkene</i> , <i>-Vci-ako</i>)	verbs or adpositions
Kope	No	Yes	prefixes (<i>Vm-Vm-</i>)	unknown
Winnebago	Yes	No	prefixes (<i>ho-gi-</i> , <i>hi-ho-</i> , <i>hi-ha-</i>)	adverb (<i>gi-</i>)
Shipibo-Konibo	Yes	No	suffixes (<i>-kin-xon</i> , <i>-kin-naan</i>)	(unknown)
Kashibo-Kakataibo	Yes	No	suffixes (<i>-kin-xun</i> , <i>-anan-xun</i>)	(unknown)

Mosetén	Yes	No	suffixes (- <i>ye-ti</i> , - <i>tye-ti</i>)	(unknown)
Maasai	Yes	No	suffixes (- <i>ák-íé-</i> (with different allomorphs))	(unknown)
Wolof	No	Yes	suffixes (- <i>al-al</i>)	(unknown)
Rwanda	Yes	No	suffixes (lots of combinations)	(unknown)
Ainu	Yes	Yes (rare)	prefixes (<i>e-ko-</i> , <i>ko-e-</i> , <i>e-e-</i>)	verb(<i>ko-</i>)/noun(<i>e-</i>) or case-marker (or adposition)s
Total: 13				

8.2.3 Applicative-causative isomorphism

For some languages, we saw that applicative-causative isomorphism (Shibatani & Pardeshi 2002; Peterson 2007) could contribute to the formation of multiple applicativization. However, it is also true that there are a lot of languages in my sample which have applicative-causative isomorphism and do not have multiple applicativization. This can be understood with reference to Table 38 below, in which every applicative-causative isomorphism case in my sample is listed. If Table 37 below is considered, it can be seen that a good proportion of the languages in Table 38 do not have multiple applicativization. Therefore, it seems difficult to maintain a correlation between those two phenomena at this point.

Table 37. Multiple applicativization and applicative-causative isomorphism

Language	Heterogenous	Homogenous	Realization	Applicative-causative isomorphism
Barupu	Yes	No?	suffixes (e.g., - <i>na-o-i</i> (three suffixes))	No
Taba	Yes	No	suffixes (- <i>Vk-i</i>)	No

Warembori	Yes	No	suffixes (e.g., <i>-ta-na</i>)	No
Tukang Besi	Yes	No	suffixes (<i>-ngkene-ako</i> , <i>-Vci-ngkene</i> , <i>-Vci-ako</i>)	Yes
Kope	No	Yes	prefixes (<i>Vm-Vm-</i>)	Yes
Winnebago	Yes	No	prefixes (<i>ho-gi-</i> , <i>hi-ho-</i> , <i>hi-ha-</i>)	No
Shipibo-Konibo	Yes	No	suffixes (<i>-kin-xon</i> , <i>-kin-naan</i>)	Yes
Kashibo-Kakataibo	Yes	No	suffixes (<i>-kin-xun</i> , <i>-anan-xun</i>)	Yes
Mosetén	Yes	No	suffixes (<i>-ye-ti</i> , <i>-tye-ti</i>)	No
Maasai	Yes	No	suffixes (<i>-ák-íé-</i> (with different allomorphs))	Yes
Wolof	No	Yes	suffixes (<i>-al-al</i>)	Yes
Rwanda	Yes	No	suffixes (lots of combinations)	Yes
Ainu	Yes	Yes (rare)	prefixes (<i>e-ko-</i> , <i>ko-e-</i> , <i>e-e-</i>)	No
Total: 13				

Table 38. Cases of applicative-causative isomorphism

Language	Applicative form	Causative form	Reference
Rama	<i>yu-</i>	<i>yu-</i>	Craig (1990: 129-130)
Southern Sierra Miwok	<i>-nY</i>	<i>-nY</i>	Broadbent (1964: 74-75)
	<i>-na</i>	<i>-na</i>	Broadbent (1964: 75-76)
Koyra Chiini	<i>-nda</i>	<i>-ndi</i>	Heath (1999: 135)

Huallaga Quechua	<i>-shi</i>	<i>-shu</i>	Weber (1989: 154-155)
Javanese	<i>-i</i>	<i>ni- -i</i>	Hemmings (2013)
	<i>-ake</i>	<i>-ake</i>	Hemmings (2013)
Tariana	<i>-ita</i>	<i>-ita</i>	Aikhenvald (2000)
Wolof	<i>-al</i>	<i>-al</i>	Dione (2013)
	<i>-e</i>	<i>-e</i>	Dione (2013)
Warrongo	<i>-riL⁽¹⁾</i>	<i>-riL</i>	Tsunoda (1998)
	<i>-riL⁽²⁾</i>	<i>-riL</i>	Tsunoda (1998)
Shipibo-Konibo	<i>-kin</i>	<i>-kin</i>	Valenzuela (2002; 2010)
Taba	<i>-Vk</i>	<i>-Vk</i>	Bowden (1997)
Maricopa	<i>-y</i>	<i>-y</i> ('give')	Gordon (1986: 85-90)
Hualapai	<i>-wo</i>	<i>-wo</i>	Ichihashi-Nakayama (1996)
Bantik	<i>paN-</i>	<i>paN-</i>	Utsumi (2012: 121)
Kolyma Yukaghir	<i>-š</i>	<i>-š</i>	Maslova (1993: 273)
Rwanda	<i>-iish</i>	<i>-iish</i>	Kimenyi (1980; 1988)
Swahili	<i>-eesh</i>	<i>-eesh</i>	Thompson & Schleicher (2006: 215)
Nahuatl	<i>-lia</i>	(verb 'give')	Baker (1996: 431)
Kope	<i>Vm-</i>	<i>Vm-</i>	Clifton (1995); Schulz & Petterson (2022: 116-117)
Mbuun	<i>-e</i>	<i>-e</i>	Bostoën & Mundeke (2011)
Maasai	<i>-ie</i>	<i>-ie</i>	Lamoureaux (2004: 72-81)

8.4 Summary

In conclusion, two possible correlations concerning multiple applicativization were suggested. The first is a correlation between obligatory applicative markers and multiple applicativization. This means that looking at the diachrony of obligatory applicative markers would be somewhat like looking at the diachrony of multiple applicativization. The diachrony of obligatory applicative markers were discussed in detail in 6.3 in Chapter 6, so that it could be said that the models depicted in 6.3 in Chapter 6 and 7.2 in Chapter 7 also shows how multiple applicativization is made possible. The second is that, because

the sources of obligatory applicative markers possibly tend to be verbs or nouns, as discussed in 6.3 Chapter 6, applicative markers participating in multiple applicativization could tend to be of verbal or nominal origins. In future studies, these and the relationship between applicative-causative isomorphism and multiple applicativization should be examined with more languages.

9 Conclusion

The flow of the diachronic findings made in the main discussion are summarized as follows. In Chapter 3, possible patterns and tendencies of how systems of applicative markers in particular languages develop were discussed. It was suggested that an applicative marker which is the only applicative marker in that language tends to be of an adpositional origin, an important tendency for supporting the discussion in Chapter 4. In Chapter 4, a correlation between marker types and word order patterns were proposed. This is with the presupposition that, when an applicative marker has a formally and semantically similar adposition, the latter is likely to be the source of the former, and they are likely to realize optional applicativization. By detecting such cases in several of the sample languages, a diachronic explanation was given to the correlation. Detecting them was helpful not only for discussing the historical aspects of applicative markers, but also for discussing the historical developments of optional applicative constructions. In Chapter 5, possible patterns and tendencies of development of optional applicativization were discussed. Also, some hypotheses were proposed regarding what determines optionality, obligatoriness, and impossibility of promotion in optional applicativization from a historical point of view, in relation to the grammaticalization process of the applicative marker and case-marker (or adposition) and whether the case-marker (or adposition) is cognate with the applicative marker or not. The perspective employed in the analysis of optional applicativization in Chapter 5 was inherited to the analysis of obligatory applicativization in Chapter 6. In Chapter 6, possible patterns and tendencies of development of different types of obligatory applicativization were discussed. Chapter 7 brought together the discussions in Chapter 5 and Chapter 6, and showed how optional applicativization and obligatory applicativization interact with each other synchronically and diachronically in a uniformed way. It was also shown that the model established in that way can be combined with the models established in Chapter 3 and with the distinction of optionality/obligatoriness/impossibility of promotion in optional applicativization discussed in Chapter 5. Chapter 8 dealt with multiple applicativization. By referring to findings in Chapter 6, it hypothesized a correlation between obligatoriness of applicative markers and multiple applicativization in Chapter 8.

In summary, the diachronic findings and hypotheses were made about the following things:

- what historical factors and backgrounds determine how systems of applicative markers in particular languages develop
- what historical factors determine the synchronic properties of the marker types of the applicative markers
- what historical factors and backgrounds determine the optionality and obligatoriness of applicativization
- what historical factors determine the optionality, obligatoriness, and impossibility of promotion in optional applicativization
- what historical factors and backgrounds determine the types of obligatoriness of obligatory applicativization
- what historical factors and backgrounds determine the possibilities of multiple applicativization

The fundamentals of these findings and hypotheses were born from theoretical consideration given to aspects of applicative constructions which have not been spotlighted very much in previous studies.

Although I tried to analyze as many important aspects of applicative constructions as possible in diachronic perspective with available methods, it still leaves areas in need of further exploration. In particular, it would be interesting to take into account more languages whose sufficient data are available in both synchronic and diachronic terms.

I hope that, ultimately, the thoughts and approach developed in this study could help in some way studying other grammatical phenomena (for example, other valency-related phenomena). A particularly intriguing issue is the relationship between flagging and applicativization. If the two kinds of grammatical devices are viewed in equal terms by combining the applicative-oriented analysis developed in this study for example and the flagging-oriented analysis developed elsewhere, one could deal with a topic on a typology of “applicative-dominant languages” and “flagging-dominant languages” or something like that.

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